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ABSTRACT

Career information is built into each component of the curriculum guide consisting of 24 units designed to enhance career awareness in Grade 3-4 students. A component of Project LET (Learning Experiences in Technology), the guide is intended to be used as a working draft with units presented under the headings of animal life, government, holidays, and transportation. Existing elementary curriculum provided the basis for the development of the guide. Student involvement and ideas as well as teacher inputs were also utilized. Each unit includes the following components: (1) general overview, (2) teaching/learning resources, (3) concepts, (4) behavioral objectives, (5) methods of implementation, (6) resource people and materials, and (7) student activities. (Author/VA)

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Learning Experiences in Technology

INTEGRATED TEACHING UNIT HANDBOOK

(VT 101 980)

E
LEARNING EXPERIENCES
IN TECHNOLOGY

BOOK II

for

Grades 3 and 4

CE005204

School District of the City of Royal Oak
4000 Crooks Road, Royal Oak, Michigan 48073

June 1973

PREFACE

This guide is intended to be used as a working copy for professional staff. It is not a completed document but a working draft which will be revised at the end of the 1973-74 school year. This document cannot stand alone but is designed to be used with in-service education and our "Project LET, Guide for Implementation."

The methodology used to implement the concepts of Project "LET" is the Integrated Teaching Unit. These Integrated Teaching Units are evolutionary in nature as they are developed from the curriculum, utilizing student involvement and ideas. They are continually being implemented, evaluated, and revised by the classroom teacher. The duration of each teaching unit varies to allow for flexibility, individuality, creativity, and fulfillment of the needs and interests of each child.

Each unit evolves from the existing elementary curriculum which includes the following components:

1. general overview
2. teaching/learning resources
3. concepts
4. behavioral objectives
5. methods of implementation
6. resource people and materials
7. student activities

Inherent in each component is an awareness of careers and the way man does things. The additional content provided for children in the "LET" classroom is the opportunity to explore careers and technology through the utilization of the Integrated Teaching Unit, parent and community resource people, and exposure to numerous careers.

TABLE OF CONTENTS - 3-4

UNIT NO.

Animal Life

1. Vertebrates
2. Vertebrates: Birds
3. Candy Industry
4. Clothing Industry
5. Communications
6. Electricity and Magnetism

Government

7. Colonial America
8. Discovery and Exploration of North and South America
9. Elections '72
10. Evolution of the American Flag
11. Levels of Government

Holidays

12. Customs and Christmas
13. Thanksgiving
14. Human Biology (including conditioning and responding, dental health, and nutrition)
15. Machines
16. Michigan
17. Prehistoric Man
18. Plants
19. Royal Oak

Transportation

20. Air
21. Automobile
22. Rail
23. Using Maps and Globes
24. Weather

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: ANIMAL LIFE - VERTEBRATES

GRADE LEVEL: 3

GENERAL OVERVIEW: Animals survive in environments to which their characteristics are best suited. Every animal group has characteristic behavior patterns. Man is affected by animals.

TEACHING/LEARNING RESOURCES:

1. Reference materials:

Books:
About Animals - Childcraft
Animals - Arendel, Jocelyn
When Animals are Babies - Schwartz, Charles
Reptiles and Amphibians - Mathewson
The Birds - Peterson
Insects - Baranowski
Exploring the Animal Kingdom - Selsam
World of Nature - Walt Disney Studio
The Zoo in Pictures - Sejet
Good Time Animal Book - Watts
Animals that Help Us - Fenton
All About Fish - Burger

Films:
Animal Communities and Groups
Animals Protect Themselves
Animals With Backbones
Camouflage in Nature Through Form and Color Matching
Camouflage in Nature Through Pattern Matching
Development of the Chick Embryo
Instincts in Animals

Filmstrips:
What is a Vertebrate?
Discovering Amphibians
Animals Fit Themselves to Their Surroundings
Some Water Animals
We Protect Animals
Eggs that Produce Chicks

Realia:
Charts - Animals classification of the animal kingdom
Chick embryos
Flat Pictures - Animals Without Backbones
Animals That Help Us

2. **Field Trips:**

Seven Ponds Nature Center (Dryden, Michigan)
Pet Shop and Veterinarian Clinic

3. **Human Resources:**

Parents
Guides at Seven Ponds Nature Center

4. **Activities:**

Paper Mache Animals
Animal Puppets and Puppet Play
Animal Puzzles
Hatching Chicken Eggs
Oral and Written Reports
Role Playing -
    Animal charades
    Choral reading and role playing using poetry

UNIT TITLE: ANIMAL LIFE - VERTEBRATES

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
Group behavior	Participate in group
Man's dependence on animals	Discussions concerning what animals do to adapt to environment (shelter, food, physical changes)
Location of animal homes	
Science	
Animal behavior patterns	Identify the common animal groups and their behavior
Affect of animals on other animals including man	Participate in group discussion concerning interdependence of man and animals
Animals adaptation	
Chick development	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Group discussion Reading and research	
Group discussion Research	

UNIT TITLE: ANIMAL LIFE - VERTEBRATES (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Written reports	Construct a written report
Creative writing	
Thank you notes	
Recognition of words	
Reading for information	
Reading for pleasure	
Oral reports	
Group discussion	
Pantomine	
Play production	
Spelling	
Music	
Animal Songs	Sing a song about animals

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Writing reports Poetry prose Thank you notes Giving oral reports Putting on a puppet show	
Group singing	

UNIT TITLE: ANIMAL LIFE - VERTEBRATES (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art	
Puppetry	Construct an animal
Paper mache techniques	
Illustrations	
Careers	
Managing	Identify ten occupations created because of animals
Producing	Classify the animal occupations into the three areas of managing, producing, and service
Servicing	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Making puppets Making three dimensional animals Writing reports	
Guest speakers: Managing - zoo Producing - butcher Service - veterinarian	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PUPPETRY - (SAWDUST PUPPETS)

II. ACTIVITY FORMAT:

A. Tools and Materials

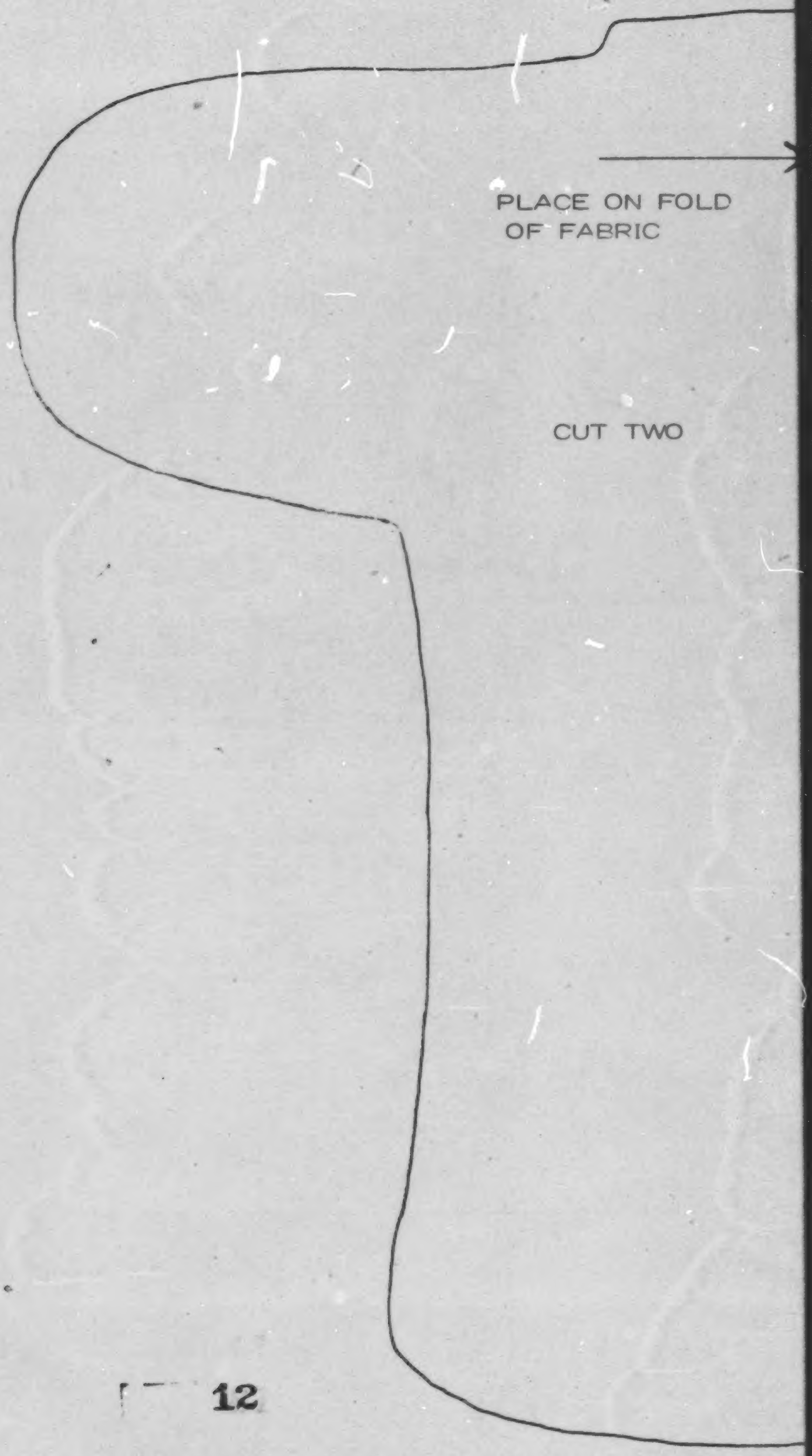
Sawdust
Wheat paste
3 x 5 cards
Paint
Sewing materials

B. Human Aides and Resources

Parent helpers

C. Procedures for this activity (with helpful hints)

1. Mix sawdust and wheat paste on a one to one basis with water
2. Roll 3 x 5 card into a tube and staple
3. Model puppet head on tube in upright position
4. Dry for 2 - 3 days
5. Paint and decorate
6. Make a costume by tracing pattern and sewing


PLACE ON FOLD
OF FABRIC
CUT TWO

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HATCHING CHICKEN EGGS

II. ACTIVITY FORMAT

A. Tools and Materials

Incubator	Light bulb
Fertilized eggs	Aluminum foil
Cardboard box	

B. Procedures for this activity (with helpful hints)

1.a. Buy eggs from Holtz Apples and Egg Farm in Romeo
  b. Mark eggs with an X on one side
  c. Keep incubator at 101 degrees F.
  d. Turn eggs over 3 - 5 times daily
  e. Eggs take from 19 - 21 days to hatch

2.a. Line a cardboard box with aluminum foil
  b. Make a hole in side of box which is 1/2 diameter of egg
  c. Put the light bulb inside box and darken the room
  d. Placing egg halfway in hole will allow light to shine through egg showing embryo outline
  e. Do this frequently to watch development

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. **NAME OF ACTIVITY**

ANIMAL PUZZLES

II. **ACTIVITY FORMAT**

A. Tools and Materials

Magazine
Cardboard
Glue
Mod Podge
Paint Brush
Scissors

B. Procedures for this Activity (with helpful hints)

1. Find large animal picture in magazine
2. Glue picture to cardboard
3. Cover with Mod Podge (using paint brush)
4. After drying (10 minutes) cut into pieces
5. Store in envelopes with name of animal

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PAPER MACHE ANIMALS

II. ACTIVITY FORMAT

A. Tools and Materials

Chicken wire
Wire snips
Large staples
Newspaper strips (3" x 12")
Wheat paste
Paint
Yarn
Cotton
Buttons
Shellac
Pipe cleaners

B. Human Aides and Resources

Older student paired with each third grader

C. Procedures for this activity (with helpful hints)

1. Form shape of animal with wire
2. Prepare wheat paste
3. Cover figure - 2 coats
4. Paint animal - shellac
5. Add features

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: ANIMAL LIFE - VERTEBRATES: BIRDS

GRADE LEVEL: 3rd - 4th

GENERAL OVERVIEW: The purposes of this unit are:

To differentiate the kinds of birds in this area and their adaptation to environment.
To discover that birds are vertebrates.
To relate how birds help man and how man can help man.

TEACHING/LEARNING RESOURCES:

1. Reference materials:

Films:
Birds: How We Identify Them
White Throat
Birds and Their Characteristics

Filmstrips:
Migration of Birds
How Birds Serve Man
Adaptions
Beaks and Feet of Birds
What Is A Bird?
Discovering Birds

2. Human Resources:

Carpenter
Poultry Farmer
Ecologists
Conservationist
Naturalist
High School Students
Industrial Arts Teacher

3. Activities:

Making Bird Houses

UNIT TITLE: ANIMAL LIFE - VERTEBRATES: BIRDS

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies Bird Migration	Participate in class discussion on migration routes of different birds of this area
Math Linear measurement	Compare and differentiate 1/4", 1/2" and 1"
Science Study of birds a. Protection b. Shelter c. Ecology	Identify 4 local birds List 3 ways birds are useful to man

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Introduction through: Class discussion Trade books, films and filmstrips	

UNIT TITLE: ANIMAL LIFE - VERTEBRATES: BIRDS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Reporting and Writing	Devise ways to help birds Write reports of different birds
Reading a. Information b. Pleasure	
Discussion in class	
Careers	
Product Production	List 5 careers which produce products related to birds
Services	List 5 careers which provide services related to birds

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Interviewing: Carpenter Poultry farmer Ecologists Conservationist Naturalist Department of National Resources Reports Assembly line production of Birdhouses	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BIRD HOUSE (Pattern (and literature) available for 25¢ from The Grand Rapids Audubon Club, 54 Jefferson Avenue, S.E., Grand Rapids, Michigan 49502)

II. ACTIVITY FORMAT

A. Tools and Materials

1/2" white pine
Hand saw
Drill-bits
Hammer
Try squares
Nails
7 medium eye bolts

B. Human Aides and Resources

High School Students
Industrial Arts Teacher

C. Procedures for this activity (with helpful hints)

1. Divide class into seven groups
2. Students measures big pieces
3. Saw big pieces
4. Locate holes in bottom, front and back pieces
5. Drill holes
6. Lay out angle cuts on sides
7. Cut angle on sides
8. Assembly
9. Mount bird on trees surrounding playground at Maxwell Park. Quality control person for each group.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT PLANSHEET

TITLE: CANDY INDUSTRY

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The major purpose of this unit is to bring out career awareness and concepts of manufacturing and producing packaging and advertising.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: Sounds of Numbers - "One, Two, Three, Four"
Sounds of Laughter - "A Maker of Boxes"

2. Field Trips:

Trips to candy factories are restricted due to laws established by State of Michigan law

3. Human Resources:

Candy maker
Parents to demonstrate candy making

4. Activities:

Candy Manufacturing
Taking Surveys
Writing books
Set up candy factory

UNIT TITLE: CANDY INDUSTRY

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Writing of prose and poetry	Write prose by following a given pattern
Art	
Packaging	Package a product
Advertising	Advertise a product
Illustrating	Illustrate a book
Social Science	
Candy around the world	List candies from around the world
Differences in peoples taste	Take a survey of the types of candy people like
History of candy	List the origins of candy and sweets and several points of development
	List ways of perserving foods

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Produce a book	
Candy making activities	
Group discussion Survey Observations	

UNIT TITLE: CANDY INDUSTRY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Careers	
Advertising	Design and make some form of advertisement
Packaging	Package a product made by himself
Manufacturing	Make candy
Sales	Sell candy
Consumer demand	Take a survey and make a product that was demanded the most
Assembly production	Take part in an assembly line production
Science	
Changes in the state of matter	Observe a solid form of matter change to a liquid and a liquid change to a gas

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Candy making Survey Role playing assembly line production	
Candy making Group discussion	

UNIT TITLE: CANDY INDUSTRY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math	
Measurement	Measure liquids and solids
Surveys	Take part in a survey
Money	Handle money through sale of product
Review of ordinal & cardinal #s	Use cardinal and ordinal numbers in creative writing

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Candy making	
Survey of class' likes and dislikes	
Sale of product	
Creative writing	
Measuring	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SET UP A CANDY FACTORY

II. ACTIVITY FORMAT

A. Tools and Materials

Hot plates	Ingredients in recipe for no-bake candy
Fry pan	
Cooking utensils	Recipes

B. Procedures for this activity (with helpful hints)

1. Discuss necessity of sanitation
2. Make different kinds of no-bake candy in small groups
3. Discuss and do packaging in pie pans, labeling on scales
4. Weigh candy on scales and mark each candy box
5. List and glue contents of candy on each box
6. Give 1/2 lb. box of candy to mothers

CANDY RECIPES

DREAM NUT FUDGE

1 3 oz. pkg. cream cheese
2 1/2 cups confectioners sugar
1/2 teaspoon almond extract
1/2 cup chopped nut or coconut
pinch of salt

With electric mixer at medium speed, beat cream cheese until soft and smooth. Slowly blend in sugar, extract, nuts, salt. Press into greased 9 by 5" pan. Refrigerate until firm, cut into squares. Makes about 2 1/2 dozen squares.

SKILLET FUDGE

2 squares unsweetened chocolate chopped
1 1/2 cups sugar
1 tbsp. margarine
2 tbsp. butter
7 tbsp. milk
7 tbsp. white corn syrup
1 tsp. vanilla

Combine all ingredients in heavy 12 inch skillet. Bring to a hard boil and boil 1 minute. Cool for 5 minutes. Beat until it loses most of its gloss. Pour into greased 8 x 8 pan. Cut into squares.

MINT WAFERS

1 egg white
2 1/2 cups confectioners sugar
2 tsp. butter
1/2 tsp. peppermint flavoring

Combine ingredients in mixing bowl. Mix until creamy. Tint in shades of delicate yellow, pink, and green. Knead with hands. Shape into 1 inch balls; place on waxed paper and flatten with tines of a fork.

SNOWBALLS

1 6 oz. pkg. semi-sweet chocolate pieces
1/3 cup evaporated milk
1 cup confectioners sugar
1/2 cup chopped walnuts
13 1/2 oz. can coconut

VANILLA WAFER TURTLES

Use two cookies for each turtle. Frost underside and attach legs of elbow macaroni. A tooth pick doubles for a tail and anchor for head of gumdrop. Frost between 2 cookies to hold toothpick.

Frosting: Mix one cup confectioners sugar and 1 tbsp. milk until smooth.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING ROCK CANDY

II. ACTIVITY FORMAT

A. Tools and Materials

Oven or hot plate	Bowl
Pot	Spoon
Cookie Sheet	Cup

B. Human Aides and Resources

Teacher
L.R.T.
Parent

C. Procedures for this activity (with helpful hints)

Rock Candy

3 3/4 c. sugar
1 1/2 c. Karo light corn syrup
1 c. water
1 t. Lorann Flavoring Oil (at Sherman's drug)
Desired food coloring

1. Sprinkle cookie sheet, covered with foil with powdered sugar.
2. Mix first 3 ingredients in sauce pan. Stir over medium heat until temperature reaches 310° F. Remove from heat.
3. Stir in flavoring oil and coloring
4. Pour into foil, cool, break into pieces

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Great - easy to make - good to eat

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CAKE DECORATORS - LEARNING SEQUENCES

II. ACTIVITY FORMAT

A. Tools and Materials

Cakes (round)
Frosting mix
Food coloring
Knives
Spoons
Measuring tools
Candy
Plates
Bowls

B. Human Aides and Resources

Mothers

C. Procedures for this activity (with helpful hints)

1. Divide into 3 or 4 groups
2. Children will have a specific job
3. Each should have part in designing cake

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CREATIVE WRITING - SENTENCE STRUCTURED LANGUAGE STOIRES

II. ACTIVITY FORMAT

A. Tools and Materials

Copies of Sounds of Numbers, pg. 108, "One, Two, Three, Four"

Paper
Pencil
Crayon

B. Procedures for this activity (with helpful hints)

1. Read the story
2. Suggest title of candy and apply to the "First week of the year", etc.
3. Each child choses a number from 1-52 and writes a sentence following the pattern suggested.
4. Sentences are combined to make a book.
5. Expanding ideas - Try individual books following the pattern of "A Maker of Boxes" in Sounds of Laughter.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CANDY SURVEY - RECOGNIZING CONSUMER DEMANDS

II. ACTIVITY FORMAT

A. Tools and Materials

- Mixing bowls
- Tablespoons
- Measuring cups
- Confectioners sugar
- Milk
- Flavoring
- Measuring spoons
- Wax paper
- Food coloring
- Saran Wrap
- Fork

B. Human Aides and Resources

- Parent Aides

C. Procedures for this activity (with helpful hints)

1. Prepare ahead of time 3 flavors and 3 colors of Fondant candy.
2. Each child samples one of each flavor.
3. Each child states his preference of flavor and color.
4. Answers are tallied.
5. Note the most favored flavor and color.
6. Class makes the candy according to results of survey.

RECIPE:

1 box confectioners sugar
1/4 cup milk
1 tsp. flavoring
Food coloring

Combine ingredients and stir. Mixture will be stiff. Make small balls - flatten with fork. Wrap in saran wrap.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LARGE GROUP CANDY MANUFACTURING AND PACKAGING

II. ACTIVITY FORMAT

A. Tools and Materials

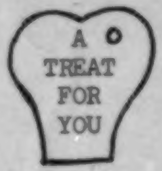
Cooking utensils
Cooking ingredients
Saran wrap
Yarn
Paper
Pencils

B. Human Aides and Resources

Parent Aides

C. Procedures for this activity (with helpful hints)

Manufacturing	Packaging (Assembly Line Production)
Selected candy recipes	1. Cut saran wrap 2. Wrap each candy in saran wrap 3. Tie saran wrap with yarn 4. Attach pre-made label
Small groups One parent supervising each small group	



2 children at each of the 4 stations

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: CLOTHING INDUSTRY

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The purpose of this unit is to apply social sciences, math, and career education concepts as they relate to the clothing industry, both in mass production and custom production.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Filmstrips:
Cotton Growing and Ginning
Cotton Spinning and Weaving
Story of Wool

2. Field Trips:

SEOVEC

3. Human Resources:

Art teacher
Seamstress
Parents

4. Activities:

Identifying materials used in clothing chart
Making a bed pillow
Making a vest
Making a loom and weaving a belt

UNIT TITLE: CLOTHING INDUSTRY

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science	
Geographic and environmental factors	Compare climate and how it effects what we wear Collect the type of materials that goes into clothing
Social Studies	
Human behavior	Locate on map where we live Analyze the relationship between the place and environment and their relationship on family
Economic behavior	Compare types of dress found in different families in countries around the world
Math	
Linear measurement	Compare prices
Money concepts	Gather data for planning budget and pay and receive correct change Measure to make pillows

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Analyze the effect between the place and its environment and the family On the map find where different materials are located, grown or collected	
Compare and contrast types of dress found in families in different countries around the world Find pictures or make pictures of different costumes. Place them on a world map. Use map skills to locate countries View filmstrips	
Investigate spending, buying and selling within a family	

UNIT TITLE: CLOTHING INDUSTRY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Letter writing	List 5 resources of clothing
Report writing	Prepare budget
Art	
Cutting	Duplicate patterns for pillow
Drawing	
Designing	
Careers	
Producing raw materials processing packaging	Identify a product and describe the stages of production from raw material to packaged product
	Investigate and describe research done on raw materials
Servicing things people	List classes of industry and types of workers in the immediate area

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Write a report on clothing in Michigan and in one country	
Make a pattern for a pillow and make pillow 12" x 12" Design the clothing for one person	
Discuss what type of industry and what kind of workers would be involved in making different costumes. e.g. tourist agency, survey, marketing Matching job to the types of workers Visit S.E.O.V.E.C.	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING A PATTERN AND BED PILLOW

II. ACTIVITY FORMAT

A. Tools and Materials

Newspaper print paper	Sewing machine
Material	Rulers
Thread & needles	Iron
Old nylons	Scissors

B. Human Aides and Resources

One parent for group of four

C. Procedures for this activity (with helpful hints)

Have group demonstration with uncut pattern to show - describe ruler and how to use it.
Using chalkboard demonstrate each line and where it would go in respect to the others.
Have child choose two pieces of material bigger than 12" x 12".
Explain that the two outsides are put together and why.
Show seam.
Have child lay pattern correctly on material and pin.
Carefully cut.
Have each child sew through sides, trim, turn right side out, press, stuff with nylons, slip stitch top.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING A VEST

II. ACTIVITY FORMAT

A. Tools and Materials

Felt
Thread & needle
Pattern
Ruler
Scissors
Sewing machine
Large white paper

B. Human Aides and Resources

One parent group of four

C. Procedures for this activity (with helpful hints)

From basic pattern make adjustments for smaller and larger child (have resource person demonstrate this).
Make own pattern.
Lay out, pin, cut and sew up sides.
Add desired fringes, pockets and designs.

III. RESULT OF THIS ACTIVITY (AFTER IMPLEMENTATION)

A custom-made vest is made as craftsmen do.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: COMMUNICATIONS

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The purpose of this unit is to study the development of written and oral communication starting with clay tablets, to the present time and incorporating the production and presentation of television programs.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Films:
Life in Ancient Rome - The Family (Scrolls)
Japanese Family (Japanese writing materials)
Indians of Early America (picture writing)
That's News to Me (about Daily Tribune)
Los Tres Osos (Spanish - other languages)

Filmstrips:
Our Alphabet
Writing with Pictures
You and Your Newspaper
The Newspaper Boy - ECF102

Books:
The Genie and the Word - Bueher
Come to Work With Us in a Newspaper - Wilkinson; Saxtant Press
Glad You're With Us (Handbook for Tribune employees)
News Explorer issued 11/27/72 on newspaper styles and format
Royal Oak Tribune - free movies
Social Science Text - Unit 2 - Level
Follow My Leader by J. Garfield (fictitious story of blind boy - his rehabilitation - written by a blind author)
Story of Helen Keller
How Books Help Us - McCabe; Benefic Press
Sending the Word - Buehr
Communication - Batchelor
Your World: Let's Publish a Book - Pope; Taylor Pub.
Your World: Let's Visit a Newspaper - Pope; Taylor Pub.
Your World: Let's Visit a Paper Mill - Pope; Taylor Pub.
The Romance of Writing - Irwin; Viking Press
Communication - Colby
How Printing Helps Us - McCabe; Benefic Press

A.B.C.'s of Hand Tools (Booklet)
A.B.C.'s of Hand Tools (Movie)
How Television Works (Book)
The Globolinks, a short musical
LET filmloop - Photographer
T.V. Guide
Detroit News

2. Field Trips:

Daily Tribune - Fridays 4 p.m.
Macomb Community College - T.V. Center
Oakland Vocational Center
Trip to Telephone Company
Trip to Western Union Office
Kimball High Print Shop
Local Print Shops
Royal Oak Tribune

3. Human Resources:

Actress
T.V. operator, M.C.C.
  - lights, make-up, stage design
  - radio announcer, M.C.C.
People who work at newspaper
Detroit News Representative

4. Activities:

Role Playing Experiences
Characterizations in play
Auditioning for plays
Role-playing - printer, artists
Printers - print lost and found article two ways
Artists - illustrate picture of missing dog
Activities from the Detroit News
Activity cards

UNIT TITLE: COMMUNICATIONS

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Reading - intonation, dictionary work, understand the play format	List ways of communicating in written form
	List three inventions which have helped us learn the ideas of the past
	List three means of written communications which are no longer used
	Participate in group discussion on bodies of knowledge which would not be available to us if they had not been recorded
	Describe what elements are incorporated into a play and why
Creative Writing - advertising, writing letters and invitations	Write a newspaper article in an area of his choice
	Make advertisement posters and programs
	Write thank-you notes to all outside people who helped
	Write a classified ad
Sentence construction	Identify correct English usage in a newspaper article; subjects, predictes, etc.
Drama	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Poetry writing	
Art illustrations	
Book making - running off dittos	
Sewing books together	
Play the game "telephone"	
Replace blurbs in cartoon strips with own dialogue	
Cut articles from the newspaper and display them on a bulletin board	
Have the children write who would be most interested in the article: i.e., soy bean prices, the farmer, housewives, pollution, laws and industry	
Listen to poems about Valentine's Day	
Listen to patterns for creative writing	
Write their own patterns for poems	
Write lost and found articles	
Children will cut out pictures from an ad and write the ad	
Find the five W's and write a feature story of their own	
Develop a skit from a short story and use it as vehicle for a T.V. production	

UNIT TITLE: COMMUNICATIONS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts (continued)	
Oral communication	In given simulated newspaper situations, will role play a specific job in the newspaper: manage a newspaper, develop and compose copy, print a paper, or distribute the paper
	Participate in developing the dialogue for a T.V. production
Five W's - who, what, when, where and why	To write a concise effective ad identify the five W's
Communicating by braille	Write thank-you letters in braille
Science	
Lighting and its effects	Describe the basic fundamentals of lighting
Sound effects	Read a weather map

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Visit and present skit at M.C.C. T.V. Studio Write telegrams on forms obtained from Western Union Office Write stories in which the letters or the message SOS was important	
Use lighting effects in a T.V. production of a play	

UNIT TITLE: COMMUNICATIONS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
Theater as a form of entertainment	Describe the production problems when working on a play, relationships, etc.
Function of communication media in our society	Describe the functions of theater and other communications media
	Demonstrate the use of the newspaper
Math	
Adding and subtracting	Recognize the responsibilities of accurately accounting for and handling money
Money	
Multiplication	Use basic math fundamentals and measurements
Graphing	Estimate the cost of advertisement
Linear measurement	Compute the difference between sale article and standard price of article
Payroll department	
Measurements for scenery	Compare and contrast prices of food
Tickets - the producing and selling of	Explain stock market reports

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Brainstorm production problems	
Cut out ads and tally prices Find from five to ten items advertised in the newspaper for under $5.00 Call newspaper for pricing formula Write a menu using advertisements from food Determine total cost of a day's menu	

UNIT TITLE: COMMUNICATIONS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
Art Costume design Stage design Stage make-up	As a result of this unit, each child will be able to: Prepare a cartoon figure Design and construct simple set with props Design posters for advertisements Recognize the purpose of stage make-up and its effects Make a wood frame Identify as a group, three major functions of the payroll department Prepare the props for a T.V. skit

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Students make wood frames - to hold clay and wax for tablets - quill pens, styli, inks and scrolls, to write their newspaper articles on them	
Students make wood blocks and relief printed designs and letters to use for printing	
Try out fountain pen and ink	
Make design for wood block	
Poets to work in quiet corner	
Artists to work at easel in beret & cape	
Book-binders to sew books together	
Book-makers to run dittos off	
Draw on slate	
Trace stencil letters (old English)	
Transfer letters (old English)	
Try out straight pens with drawing ink (maybe decorative letters)	
Examine type on typewriter for example of relief printing	

UNIT TITLE: COMMUNICATIONS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Music Selection of music for the play	Suggest music for a T.V. kit
Careers Managing Producing a product Personnel People and their jobs pertaining to communications Hiring	Fill out an application for a job of their own choosing related to a T.V. production List 8 jobs involved in T.V. production Participate in a T.V. production List 10 jobs related to the production and distribution of newspapers

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Write, print and distribute a newspaper Make a Who's Who book from clippings in a newspaper	
Brainstorming jobs in a newspaper, and different sections of the newspaper Choose the sections they want to study and then write an original article Three children were selected from the class to act as auditioners Discuss printers jobs Discuss artists jobs Poets Book maker (Book binders) Advertiser Printers Salesman	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING A NEWSPAPER

II. ACTIVITY FORMAT:

A. Tools and Materials

Typewriters
Ditto masters

B. Procedures for this activity (with helpful hints)

1. Decide on which departments will be included and jobs that will be created
2. Have children apply for the jobs
3. Teacher helps department heads to supervise their departments
4. Set a deadline for publication
5. Have students produce the paper and then distribute it

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

The follow-up discussion should include ideas for creating more appeal among the readers, how repetition or creativity helped or hurt the various jobs, responsibility and the success of the total adventure.

APPLICATION FOR EMPLOYMENT - NEWSPAPER

NAME ____________________ ADDRESS ____________________

PHONE ______________ HOW MANY YEARS EDUCATION? ______________

WHAT ARE YOUR BEST SUBJECTS? ____________________

WHAT DO YOU LIKE TO DO IN YOUR SPARE TIME? ____________________

PREVIOUS EMPLOYMENT ____________________

(Chores at home
Chores in neighborhood ____________________
Jobs at school) ____________________

CHECK BELOW THE FIVE POSITIONS YOU WOULD MOST LIKE TO HAVE AND FEEL YOU ARE QUALIFIED FOR

Position	Duties	Qualifications	Salary
Publisher	Owns paper Promotes paper Interviews Pay employees Makes rules Leader of group	Good in all subjects Lots of knowledge Gets along with others Is fair, pleasant	
City Editor	Decides what goes into paper Makes decisions	Good in writing, English Reading, Social Science Good judgment Speed	
Sports Editor	Decides what goes into sports section makes decisions	Same as city editor - and knowledge of sports	
Women's Editor	Decides what goes into women's section Makes decisions	Same as city editor - and homemaking skills Science, Arts, Crafts	
Special Writers	Responsible for daily article	Good in writing, English, reading-dependable, prompt	
Reporter	Finds the news Brings it back	Good in English, writing, reading, spelling, social science Fast - good memory Good personality Must know 5 W's and H	
Photographers	Finds the news Takes pictures and brings them back	Good in science, art, Math Speed	

APPLICATION FOR EMPLOYMENT - NEWSPAPER (continued)

CHECK BELOW THE FIVE POSITIONS YOU WOULD MOST LIKE TO HAVE AND FEEL YOU ARE QUALIFIED FOR

Position	Duties	Qualifications	Salary
Rewrite Man (or women)	Writes up reporters' stories, clearly, and correctly and in interesting way	English, Spelling, writing Speed - accuracy Proper sequence Can express main idea	
Advertising Manager	Gets businessmen to advertise Helps choose good Advertisements	Good in English, Art Ability to persuade	
Classified Ad Department Clerks	Take information for ads Quotes prices	Good in math, English Reading, Spelling Accurate Pleasant	
Bookkeepers	Pay bills Pay salaries	Good in math, accuracy Manual skills (Adding machines and comptometer) Computers	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BUILD RUBBER STAMPS

II. ACTIVITY FORMAT:

A. Tools and Materials

Wood scraps
Inner tubes
Elmer's glue
Ink pad
Brayer
Ink
10 x 10 plexiglas sheet
Scissors

B. Procedures for this activity (with helpful hints)

1. Cut a simple shape (circle, clover) from the inner tube and glue it to a wood scrap. This is your stamp.
2. If the stamp is small the stamp pad may be used for inking the stamp. If it is large, the oil based ink may be placed on the plexiglas and spread with the brayer.
3. Letters can be cut from the inner tube and an entire alphabet be made for composing messages.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

The children learn that it is easier to print if duplicates of letters are made and more than one letter at a time printed. They also learn that the letter must be reversed on the block to print correctly on paper.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PRINTS FROM PLASTIC

II. ACTIVITY FORMAT:

A. Tools and Materials

Thick, white, plastic meat trays
Smock/old shirt
Pencil
Rubber brayer
Newspaper
Paper - (wrapping, tissue, construction)
Window glass
Block printing ink (water soluable)

B. Procedures for this activity (with helpful hints)

1. Wash meat trays and cut off upturned edges.
2. Cut plastic to the size of print wanted.
3. Draw your design (simple, bold designs come out best).
4. Get ready to print. Set up assembly line as follows:
   - a. The piece of glass with ink and brayer.
   - b. One whole sheet of newspaper folded three times, for rolling the ink on the plastic print.
   - c. Several sheets of newspaper folded to make a pad for the actual printing.
5. Squeeze out 1/2" of ink on glass and spread with brayer.
6. Roll the ink on the design.
7. Carefully place the print, inked side down, on printing paper.
8. Press down all over - (use fist or spoon).
9. Carefully lift plastic print and set aside to dry.
10. Frame or mount.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

WANT ADS FOR PONY EXPRESS RIDER

II. ACTIVITY FORMAT:

A. Tools and Materials

Reading text - 4th grade - Pony Express Rider
Paper
Pencil

B. Procedures for this activity (with helpful hints)

1. Discussion of the history and excitement of the Pony Express
2. Discuss qualification of Pony Express rider
3. Write a want ad for Pony Express rider as it might have appeared in a newspaper of 1868
4. Use this as a motivation to study want ad (help wanted) in the daily newspapers; discuss qualifications for jobs, how to answer a job want ad, etc.
5. Compute costs of mailing a letter via Pony Express with the costs of mailing a letter today - use a scale to determine ounces and then cost of mailing

(In 1860 the Pony Express carried mail at the rate of $5.00 an ounce)

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

INK MAKING

II. ACTIVITY FORMAT:

A. Tools and Materials

Charcoal
Beet juice
Blueberry juice

B. Procedures for this activity (with helpful hints)

Inks: Book suggested mixing with linseed oil - it tended to separate. I had better luck mixing with some Elmer's glue or cornstarch. Rubbed charcoal on sandpaper to grind it up.

Lemon juice for invisible ink. Write on lined paper with Q-tips. When dry it is invisible. Iron over paper to make words appear.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SCROLLS - QUILL PENS

II. ACTIVITY FORMAT:

A. Tools and Materials

Dowels - up to 1" diameter. Cut into 6"
lengths (or size you desire)
Oil paints
Shelf paper

B. Procedures for this activity (with helpful hints)

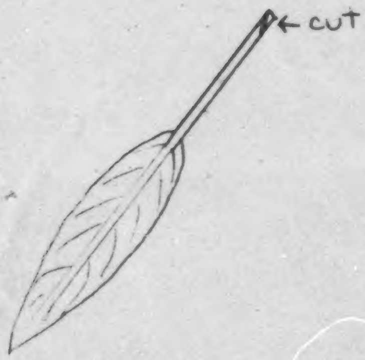
Cut dowels - write on shelf paper (scroll). Attach to two dowels thumb tacks. We decorated the wood dowels first with oil paint.

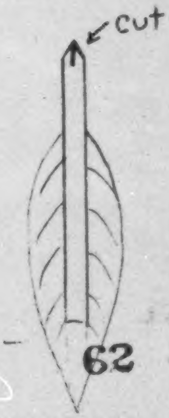
NOTE: According to what I read scroll was written in columns and was read from right to left - not top to bottom, i.e.

Some wrote with their quill pens (or straight pens using inks we made). Some used "rub off" old English style stencil letters.

QUILL PENS: Used duck and chicken feathers (had much difficulty obtaining them. Was visiting in Wisconsin farm area and got them from a farmer - couldn't find any for sale in Detroit area.

Hold quill nib, at end, sideways and cut with manicure scissors. Then cut slit through middle.





HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING WAX AND CLAY TABLETS

II. ACTIVITY FORMAT:

A. Tools and Materials

Wood
Wax
Natural clay (fire) (like that used for adobe)
Paint

B. Procedures for this activity (with helpful hints)

1. Cut wood about 12" lengths - about 6" wide. Cut 4 sides about 1" thick to form sides and hold clay and wax. Nail on sides. Sand pieces before nailing. We painted them but not necessary.

   a. Moisten clay and pack it in frame. While still damp write in it with stick or nail. Cut stick so it forms flat triangle. Other end can be used as eraser. Dries overnight. (Some of them tended to crack unless packed quite tightly.) These areas can be filled in. It was easier to read when we went over the indentations with charcoal or paint.

   b. Wax tablets - melt candles or use colorless wax with melted crayons - pour into frames. They tend to leak until wax in cracks starts to harden. When dry - write on them with stylus (we used large nails - blunt end can be used for eraser).

NOTE: I was given a suggestion which needed further explanations. To re-use wax tablets, put in oven at 165 degrees. This re-melts the wax. However, some mothers complained the wax leaked out all over their ovens.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BLOCK PRINTING

II. ACTIVITY FORMAT:

A. Tools and Materials

Wood 2 x 4's
Rubber inner tubes or yarn

B. Procedures for this activity (with helpful hints)

1. Draw design - cut out of rubber inner tube and paste on block - or paste two or three thicknesses of yarn on wooden block.
2. Then put paint on it, and repeat the design on large sheet of paper. Some used this as gift wrapping paper. Some made their initials - had to remember to put it on backwards.

DAILY CHIT CHAT TELEVISION PRODUCTION

Announcer: Would you like to visit a newspaper? Let's take a trip through Room 17's newspaper - The Daily Chit-Chat

CAST - Diana - Hold up sign

SCENE ONE - Cast - Terri Altizer

Announcer: As we walk in, we see our switchboard operator, Miss Terri Altizer. She takes all incoming calls and connects callers with the proper person.

....

SCENE TWO - Cast: Darren Calhoun, Cherie Juntikka, Mark Rakoczy

Announcer: Next, we'll look in on our publisher, Mr. Darren Calhoun and his secretary, Miss Cherie Juntikka. Mr. Mark Rakoczy is applying for a job.

....

SCENE THREE - Cast: Annette Mullas, Laura Phillips

Announcer: Our advertising Manager, Miss Annette Mullas, is selling newspaper space to Miss Laura Phillips, president of J. L. Hudson's. The newspaper makes most of its money from advertising.

....

SCENE FOUR - Cast: Darren Calhoun, Jimmy Collick, Susan Yirovec, Tom Kaiser, Shaw Gordon

Announcer The Classified Ad Department is always busy. Many people put ads in the paper. Mr. Darren Calhoun is talking with customers. Miss Susan Yirovec and Mr. Jimmy Collick are typing up the ads and sending them to the Composing Room.

....

SCENE FIVE - Cast: David Dernier, George Bastuba

Announcer: Here we see Mr. George Bastuba, a clerk in the morgue. This is where copies of old newspapers are kept. Mr. David Dernier, the copy boy, is speaking with him.

....

SCENE SIX - Cast: Becky Woods, Liz Worthen

Announcer: The Bookkeeping Department handles all the money. They put money they receive in the bank and pay all the bills. They also make out the paychecks for the employees. Miss Becky Woods is the head bookkeeper. Miss Liz Worthen is a typist.

....

SCENE SEVEN - Cast: David Dernier, Mark Connelly, Todd Azarias, Mark Rakoczy, Joe Guarino

Announcer: Let's follow our reporters, Mr. Mark Connelly and Mr. Todd Azarias and our photographers, Mr. Joe Guarino and Mr. Mark Rakoczy as they interview the famous Olympic swimming star, Mark Spitz.

....

SCENE EIGHT - Cast: Paul Nation, Tom Flynn, Colleen Krog, Holly Jaye, Cherie Juntikka, Tom Barr, David Schumacher, Chris Bjornberg, Theresa Furlong

Announcer: Here we see another interview. Reporter, Mr. Chris Bjornberg and Photographer, Miss Theresa Furlong are talking with Vietnam prisoners of war who have just come home.

....

SCENE NINE - Cast: Mark Connelly, Todd Azarias, Chris Bjornberg, Joe Guarino, Mark Rakoczy, Theresa Furlong, Barb Hamby, David Dernier

Announcer: The reporters and photographers bring their stories and pictures back to the newspaper and give them to our rewrite woman, Miss Barb Hamby. Her job is to change the stories so they are interesting and clear. She corrects all mistakes.

.... (Copy Boy - Take these to the City Editor and these to the Sports Editor)

SCENE TEN - Cast: Ken McDonough, Diana Walker, David Dernier

Announcer As we look in on our City Editor, Mr. Ken McDonough, he is dictating a letter to his secretary, Miss Diana Walker.

.... (Copy Boy - Take these stories to linotype operator and the pictures to photoengraving)

SCENE ELEVEN - Cast: Pat Harper, David Dernier

Announcer: Here is our Sports Editor, Mr. Pat Harper. He is selecting the best sports stories to go in today's paper.

.... (Copy Boy - Take these stories to linotype operator and the pictures to photoengraving)

SCENE TWELVE - Cast: Beth DeWitt, Angela Pielack

Announcer: Now let's visit our Women's Editor, Miss Beth DeWitt. Her secretary, Miss Angela Pielack is answering the phone.

....

SCENE THIRTEEN - Cast: Tom Barr, David Dernier

Announcer: Our copy boy, Mr. David Dernier, is taking the pictures to the photoengraving foreman, Mr. Tom Barr. He will make metal plates from them.

.... (I'll get these over to the Composing room as soon as possible)

SCENE FOURTEEN - Cast: Billy McDonald, Tom Flynn

Announcer: We're in the Composing Room now, watching Mr. Billy McDonald, the linotype operator.

(I'm making metal letters for the press)

Announcer: Mr. McDonald then takes the metal slugs to Mr. Tom Flynn, the proof reader. Mr. Flynn checks them carefully for any mistakes.

SCENE FOURTEEN - continued

Billy: (Here you are, Mr. Flynn. Check them over.)
Tom: (You spelled prisoners incorrectly.)

....

SCENE FIFTEEN - Cast: Tom Flynn, David Schumacher

Announcer: Mr. Flynn then takes the metal slugs to Mr. David Schumacher, our make up man. He arranges all the pictures and stories attractively for each page of the newspaper. This is called the galley.

....

SCENE SIXTEEN - Cast: Paul Nation, Mark Connelly, Chris Bjornberg

Announcer: The galley is then made into a curved metal sheet to fit on the rollers in the press room. Then the newspaper is ready to roll. Mr. Paul Nation, our press foreman is setting up the press. His helpers are Mr. Chris Bjornberg and Mr. Mark Connelly.

.... Note: Hold up real newspaper

SCENE SEVENTEEN - Cast: Kelly Gipson, Jimmy Collick

Announcer: While we're waiting for the papers to be run off, let's look in on our Circulation Manager, Miss Kelly Gipson. She's responsible for getting the papers to the customers. She's talking to a new customer.

....

SCENE EIGHTEEN - Cast: Todd Azarias, Shaw Gordon, Jimmy Collick

Announcer: Now, let's see what's happening to our newspapers. After Mr. Nation runs them through the press, they are taken on a conveyor belt to be loaded on a truck. Mr. Todd Azarias is loading the truck. Mr. Shaw Gordon, the driver, will deliver the papers to the newsboys.

....

SCENE NINETEEN - Cast: Jimmy Collick, Tom Kaiser

Announcer: Finally, we see our newsboy, Jimmy Collick, delivering papers to his customers.

....

Announcer: Tomorrow, and every day, the employees of the Daily Chit-Chat will be working hard again to bring the news to your home.

THIS WAS THE STORY OF THE DAILY CHIT-CHAT

SCENE TWENTY - Cast: Ken McDonough, Chris Bjornberg

____________ ____________ ____________ ____________

____________ ____________ ____________ ____________

DAILY CHIT CHAT TELEVISION PRODUCTION (continued)

Announcer:	This program has been brought to you by the Elaine Meyer Square Dance Studio. And now we close with a message from our sponsor.
	Ken: Amaze your friends. Learn how to square dance.
	Chris: Only $10 for twelve easy lessons. Come and see us tomorrow at the Elaine Meyer Square Dance Studio.
Announcer:	Thank you for watching. So long and have a happy day.

THE BIG-LITTLE QUESTIONS

An important tool for the clear thinker is the fact. Facts are statements which a reasonable person accepts as true. Usually facts can be proved. Once you have facts, you are in a better position to form opinions, make decisions, take action.

Facts aren't to be crammed into your head as a warehouse is stuffed with furniture. Facts are really the "raw material" of your thinking. They are not the end product. The important thing is to know how and where to find the facts.

How can you find the facts? Six little words unlock some big doors to facts and answers.

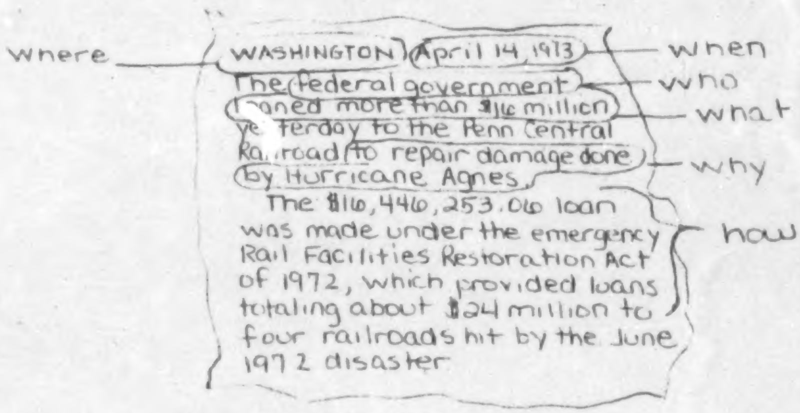
Try asking yourself these big-little questions:

WHO? WHEN? WHY?

WHAT? WHERE? HOW?

They help to develop ideas, present problems, ask for opinions, dig for answers. By learning to ask and answer, a clear thinker can explore many possibilities and perhaps come up with new approaches to old problems, new ideas for old procedures, new information on old subjects.

How do the big-little questions work? Very often big-little questions are answered in the lead of a news article. In the paragraph following the lead, the reader learns more specific information - answers to questions behind the big one.



WASHINGTON (April 14, 1973) The federal government loaned more than $16 million yesterday to the Penn Central Railroad to repair damage done by Hurricane Agnes.

The $16,446,253.06 loan was made under the emergency Rail Facilities Restoration Act of 1972, which provided loans totaling about $24 million to four railroads hit by the June 1972 disaster

Once the big-little questions are answered, some further questions that might be raised are: Who else was in the race? What were their finishing times? How many people saw the race? Did Dave Patrick break any records? What was his reaction to winning? What was the significance of the race? These questions and many others might be answered in the rest of the article. In this way, the reader gets the main facts first and many others next.

THE BIG-LITTLE QUESTIONS (continued)

Read this lead to find the main facts, and write in answers to the big-little questions.

June 14 - An American expedition has found what it believes to be the remains of Christopher Columbus's flagship, the Santa Marie. The wreck of the famed vessel was found off the coast of Hispaniola, a large island in the Caribbean Sea. Columbus's own log and documents of the period helped the archaeologists pinpoint the location.

WHO?____________________ WHEN?____________________

WHAT?____________________ WHY?____________________

WHERE?____________________ HOW?____________________

APPLICATION FOR EMPLOYMENT - TELEVISION STUDIO

NAME ______________________ ADDRESS ______________________

PHONE ______________ HOW MANY YEARS OF EDUCATION? ______________

WHAT ARE YOUR BEST SUBJECTS? ______________________

WHAT DO YOU LIKE TO DO IN YOUR SPARE TIME? ______________________

WHAT ARE YOU ESPECIALLY GOOD AT? ______________________

LIST YOUR PREVIOUS EMPLOYMENT? ______________________

Position	Duties	Qualifications
Producer	The leader hires everyone - pays employees - finds a company to pay for the show in exhange for advertising	Must understand people and be able to get along - Good in expressing himself (herself) - good in all subjects
Writers	Write plays or skits or shows. Some write commercials.	Good imagination - good in creative writing, English, reading, social studies, spelling
Director	Instructs actors, cameramen, etc. Responsible for seeing that the show is done well. Sits in the control room. Tells cameramen what to do. Tells sound men (with microphones) where to go	Good actor - good in speech, English, reading, science (must understand how all the equipment works), social science - understanding and getting along with his group - good leader
Assistant Director	Stands in front of actors on stage and gives directions with gestures. Holds up cards with their parts written so they won't forget.	Good leader. Good in reading, English. Must be fast and well organized. Must be able to make himself understood without words.
Actors	Learn parts. Obey directions of director and assistant director. Be willing to work long and hard at rehearsals. Be on time.	Good in speech, English. Good imagination. Must be able to put themselves in the "shoes" of the character they're playing. Must be patient, able to take orders without complaint.

APPLICATION FOR EMPLOYMENT - TELEVISION STUDIO (continued)

Position	Duties	Qualifications
Carpenters	Make scenery and props	Good in manual skills, math, following directions, accuracy
Painters	Paint scenery Make backgrounds	Art, creativity, following directions, math, accuracy, patience
Fashion Experts	Plan costumes for actors. Make costumes. Make decisions about what looks best on each actor.	Good in art, creativity, social science (history of clothing), science - kinds of materials and how they're used. Manual skills.
Artists	Make drawings for plays and commercials. Sometimes animated cartoons.	Good in drawing - good imagination, patience, accuracy.
Cameramen	Focuses camera on actors Sometimes for close-ups, sometimes at a distance Usually several cameramen Director chooses best picture	Good in science (operating and understanding camera). Good in math (distance measuring). Listening skills: director tells him what to do.
Stagehand Electricians	In charge of stage lighting. Many different kinds of lights (soft, strong, different colors)	Good in science, alert, good listening skills (director tells him what lights to use at different times). Speed.
Propmen	Put out scenery needed for skit. Change scenery when needed.	Good memory. Good attention. Well organized. Speed.
Soundman	Has large microphones on poles which he moves around as actors are speaking.	Good in science (sound). Alert. Careful (michrophone mustn't show up on camera). Speed. Good listening skills (director tells him where to move microphones).

THE FOLLOWING JOBS WE MIGHT NOT USE:

News Reporter	Writes up the important news. Rehearses (practices) reading it well.	Good in social science (current events). Good in speech, English, reading. Neat appearance, pleasant.
Audioman	Sits in controls room and "adjusts" sound. Makes it louder or softer as necessary. Has tapes to play for sound effects, music, etc.	Good listener. Good in science. Fast, alert.

APPLICATION FOR EMPLOYMENT - TELEVISION STUDIO (continued)

Position	Duties	Qualifications
Movie Cameraman	Goes outside and takes pictures of important news. Brings it back for news reporters.	Good in science, math, social studies. Fast, accurate.
Film Editor	Goes through news films and picks out best scenes. Cuts out what he doesn't want.	Good in social science. Must make fast and good decisions. Good in science. Must be fast and accurate.
Projectionist	Picks out slides and movies to show on TV.	Good judgment. Good in social studies. Good memory and organization.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SHADOW PUPPETS

II. ACTIVITY FORMAT:

A. Tools and Materials

Dark colored poster paper
12" sticks
Glue
Colored cellophane

B. Procedures for this activity (with helpful hints)

1. Cut out form from poster paper for puppet.
2. Cut out features you want light to shine through with color (eyes, buttons, etc.).
3. Glue cellophane on back covering cut out features.
4. Tape stick on back about 1/2 way up for handle.
5. Set up screen. Shine light on it. Children stand/sit about 4 feet back from screen.
6. Write plays, short stories, record, etc.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SENDING MORSE CODE

II. ACTIVITY FORMAT:

A. Tools and Materials

Reading textbook - Open Highways - Grade 4

Batteries
Wood
Buzzer
Bell
Light bulb
Wire tool rack

Telegraph Key from Instructional Materials Center

B. Procedures for this activity (with helpful hints)

1. Read SOS= in Open Highways - Grade 4 - p. 184.
2. Study pattern of dots and dashes making up Morse Code.
3. Send messages to classmates by writing out Morse Code.
4. Tap out longs and shorts to send messages by Morse Code.
5. Divide into small groups to devise and make some kind of transmitter which could be used to send Morse Code (bell, buzzer, light bulb, flags, etc.).

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

WRITING WITH PICTURES

II. ACTIVITY FORMAT:

A. Tools and Materials

Scissors	Encyclopedias
Colored paper	Library books on communication
Glue	

B. Procedures for this activity (with helpful hints)

1. Divide into small groups.
2. Choose form of communication for study, dramatization, and illustration; e.g. suggested topics -
    - a. Smoke signals
    - b. Cave man picture writing
    - c. Egyptian hieroglyphics
    - d. African drums
    - e. Heliograph
    - f. Indian writing
    - g. Homing pigeon 2000 B.C.
    - h. Pony Express 1860
    - i. Invention of telegraph
    - j. Invention of telephone
    - k. Radio
    - l. Television
    - m. Satellites
3. Have students dramatize their chosen form of communication.
4. Arrange individual pictures depicting each form of communication in chronological order on a bulletin board.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING-UP A CODE SYSTEM

II. ACTIVITY FORMAT:

A. Tools and Materials

First Book of Code and Ciphers by Sam Epstein

Paper and pencil

B. Procedures for this activity (with helpful hints)

1. Discuss use of code during World War II and other wars. Discuss importance of code deciphers during wars.
2. Have each child devise his own system of code - whereby each letter of the alphabet is represented by some symbol.
3. Have children send message to friend in their original code. See if friend can crack code by telling him certain key letter symbols.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING FLAGS USED TO SEND MESSAGES AT SEA

II. ACTIVITY FORMAT:

A. Tools and Materials

Sending the Word by Walter Buehr, pp. 56-57

sample flags
alphabet flags

Colored paper
Scissors
Glue

B. Procedures for this activity (with helpful hints)

1. Show large chart illustrating the flag that represents each letter of the alphabet.
2. Have each child make a flag for one letter of the alphabet.
3. Mark letter on the flag so that it can be readily identified.
4. When entire flag alphabet is completed have children take turns sending messages to class with flags.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TELEPHONE ACTIVITIES - ANSWERING SERVICE

II. ACTIVITY FORMAT:

A. Tools and Materials

Telephone usage kit
Guide in kit
Tape Recorder - listening post

B. Procedures for this activity (with helpful hints)

1. Allow students to use tape recorder to establish and ask questions of Mrs. Beattie's Answering Service.
2. Children ask questions of teacher on tape recorder.
3. The next day the child will find my answer on the tape which he may listen to at the listening post in his free time.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: ELECTRICITY AND MAGNETISM

GRADE LEVEL: 4

GENERAL OVERVIEW: Six weeks science unit dealing with electricity and magnetism.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: Magnetism and Magnets (How and Why Books)

Films:
Electricity - How It Is Generated
Electricity - Principles of Safety
Introduction to Electricity
Learning About Electric Current
How to Stimulate Your Science Program - by Vessel and Wong

2. Field Trips:

Greenfield Village (Henry Ford Museum)
Detroit Historical Museum

3. Human Resources:

Electrician - to demonstrate construction of telegraph or other electrical device
Parents and students
Head of Royal Oak Science Department
Call Detroit Edison for resources and materials

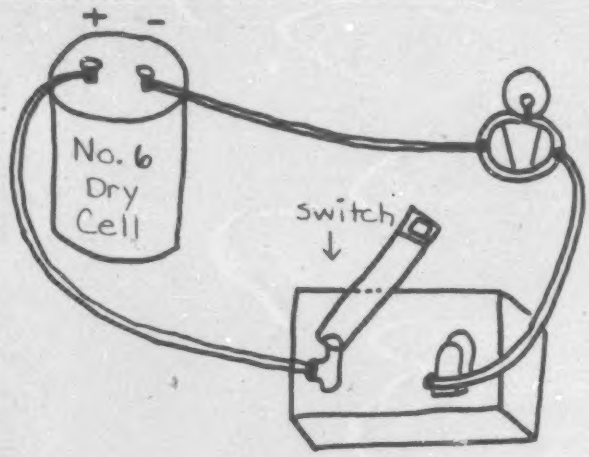
UNIT TITLE: ELECTRICITY AND MAGNETISM

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
The space around which the force of a magnet acts is called the magnetic field	Manipulate iron filings and magnet to show magnetic field
Magnets attract iron, steel, cobalt, and nickel	List magnetic and non-magnetic materials
Magnetic lines of force can travel through some materials	Identify materials that line of force penetrates
Magnets have many uses	Name uses of magnets
Magnets can be made from other magnets	Induce a magnet
An electro-magnet can be made -- magnetism can be obtained from electricity	Make an electro-magnet

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Illustrate magnetic field with iron filings	
Children will test numerous objects with a magner	
Experimentation with magnets and materials	
Bring in objects such as magnetic screwdrivers, magnetic bulletin board, latches, compass, etc.	
Stroke a nail with a permanent magnet in one direction and pick up magnet materials with induced magnet	
Wrap wire coil around nail and attach to battery. Test for effectiveness of electro-magnet - test for north and south poles	

UNIT TITLE: ELECTRICITY AND MAGNETISM (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Static electricity is produced by friction	Produce static electricity
Current electricity is produced by flow of electrons	Make an electrical circuit with a switch
Electricity is produced by chemicals	Make a chemical battery

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
a. Suspend two balloons from string and rub balloons with wool cloth. Gently push balloons together and they should repel each other b. Comb hair repeatedly and pick up scraps of paper with static electricity in comb.	
	
Insert a copper and zinc strip in a jar of vinegar. Connect ends of strips with wires to galvanometer. Test for electricity.	

UNIT TITLE: ELECTRICITY AND MAGNETISM (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Conductors vs. non-conductors	Experiment with conductors and non-conductors
Electricity can plate materials	Copper plate a key
People and their job roles related to electricity - Functions - Goods Services	Identify jobs dependent on electricity Identify those jobs dependent on electricity as being good producing jobs or service producing jobs
Thomas Edison made many contributions	Discuss life and importance of Thomas Edison

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Set up circuit and switch - replace part of wire in circuit with cloth, plastic and paper - use galvanometer to detect current	
See Science for Elementary School by E. Victor - Page 765	
a. Find picture in magazine showing people using electricity on the job. b. Children can list jobs that would not exist without electricity.	
a. See movie - Boyhood of Edison b. Make a chart of Edison's contributions	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ELECTRICITY CAN PLATE MATERIALS

II. ACTIVITY FORMAT:

A. Tools and Materials

Cooper sulfate crystals
Dilute sulfuric acid
Cooper strip
Tumbler of water
Copper bell wire No. 18
House key
Pencil
2 dry cells

B. Procedures for this activity (with helpful hints)

1. Put a heaping tablespoon of copper sulfate into a glass tumbler of warm water and stir vigorously until the copper sulfate dissolves.
2. Then add a few drops of the sulfuric acid.
3. Obtain two pieces of copper bell wire (No. 18), each piece about 24 inches long.
4. Remove quite a bit of the insulation from the end of one piece of wire and wrap a few turns of bare wire around one end of the copper strip, making sure you have a good contact between the strip and the wire.
5. Bend the copper strip so it will hang overa pencil placed across the rim of the tumbler.
6. Wrap the bare end of the second piece of wire around a house key and suspend the key in the copper sulfate solution by wrapping the wire around the pencil.
7. Now connect the other bare ends of both wires to two dry cells connected in series, as shown in the diagram, making sure that the key is connected to a negative terminal and the copper strip is connected to a positive terminal.
8. Allow the current to flow for 15 minutes, and then disconnect the wires and remove the key.
9. The key will be coated with copper.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING A MAGNETIC BOAT

II. ACTIVITY FORMAT:

A. Tools and Materials

Block of wood or styrofoam
Iron nail
Water-proof tape or cement
Aluminum pan
Saw
File
Sandpaper
Paint brushes
Magnet

B. Procedures for this activity (with helpful hints)

1. Use a toy boat, or make one out of wood or styrofoam.
2. Cut the head off an iron nail.
3. Cut a short slot in the bottom of your boat. The slot should be just big enough for the nail to fit into. If you're using a plastic boat, attach the nail with water-proof tape or cement.
4. Use bricks or wood blocks to prop up an aluminum pan, so that you can move your hand beneath it. Pan should be big enough for boat to float.
5. Move a magnet around on the underside of pan to make boat move.

Instead of a boat, apply the same principle to another water object.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ELEVEN-CENT BATTERY

II. ACTIVITY FORMAT:

A. Tools and Materials

Penny
Dime
Blotting paper
Salt
Current tester

B. Procedures for this activity (with helpful hints)

1. Clean a penny and a dime.
2. Soak a small piece of blotting paper in salt water.
3. Place the wet blotting paper between the dime and penny.
4. Use your current tester by touching one wire to the dime, and one wire to the penny.
5. Is a current produced? Explain concept.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: COLONIAL AMERICA

GRADE LEVEL: 3-4

GENERAL OVERVIEW: This unit was written to give a general overview of colonial life: homes, customs and occupations. Students compared this with the present way of life. Children are always intrigued by their American Heritage. By taking a look at a restored village, they are better able to visualize the past. Williamsburg, Virginia provided not only an historical background but also an insight to a working community.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
Children of the New Forest
Little House in the Big Woods - Wilder
First Book of Early Settlers - Rich, Louise
Frontier Living - Tunis, Edwins, World Publishing Co., New York
Colonial Craftsman - Tunis, Edwins, World Publishing Co., New York
Colonial Living - Tunis, Edwins, World Publishing Co., New York
Colonial America - Fisher, Margaret
Colonial Days - Gordy, Wilbur
A.B.C. Book of Early America - E. Sloane, Doubleday, New York
Adventures In Williamsburg - C. Seghers II & J.J. Walket
Colonial America Craftsmen (Series), L. Fisher - Franklin Watts, N.Y.
Let's Go To Colonial Williamsburg - M. J. Barreson, Putnam's Son, N.Y.
The City of Once Upon A Time - G. Waring
The Silver Mace, A Story of
Williamsburg - M. & M. Petersham
Williamsburg Art of Cookery - Instructional Materials Center

Films:
Colonial Children
Colonial Life in New England
Early Settlers of New England (Salem
Puritan Family of New England
The Light Here Kindled (Pilgrims)
The Jamestown Colony
Plymouth Colony: The First Year
Colonial America in the 18th Century

Filmstrips:

- Pilgrims, Puritans
- English Background & Voyage to the New World (R)
- 1st Year in the New World
- Massachusetts Bay
- Squanto & The First Thanksgiving (R)
- Story of Thanksgiving
- Why We Have Thanksgiving
- Early Settlers of New England
- Cooking in Colonial Days
- Plantation Life in Colonial Virginia
- Craftsman of Colonial Virginia
- Colonists are Freedom Living
- Homespun Linen
- Plantations Statesmen of Colonial Virginia
- Greenfield Village

Pictures:

- Colonial America
- Historic Williamsburg

Realia: (available from I.M.C.)

- apple parer
- butter churn and mold
- candle mold
- flat iron
- iron ladle
- soap stone
- corn husk doll
- potato masher
- vegetable slicer
- loom
- large wooden bowl and paddle
- candle snuffer
- page from grocery ledger
- iron fireplace
- toaster
- corn broom

Slides:

- Craftsmen of Colonial Virginia
- Visit to Colonial Williamsburg
- Greenfield Village

2. Field Trips:

- Greenfield Village
- SEOVEC
- Edison Institute
- Upland Hills Farm
- Detroit Historical Museum
- Pioneer Park

3. Human Resources:

Parents
Guide at Greenfield Village
Baker
Homemaker
Weaver or clothing manufacturer
People from Historical Society

4. Activities:

Role playing - dramatization of mans fight for freedom
Make autobiographies
Make hornbook
Loom making
Trading day
Dipping Candles
Colonial Cooking - Gingerbread cookies
Weaving baskets
Mural - Williamsburg
18th Century Crafts
Miller School
Colonial Hats
Making Soap (old time recipe)
Making paper from pulp
Sled - early American
Spool knitting
Boot jacks
Stilts
Dolls (Pioneer)
Popcorn
Made vegetable soup
Made corn bread
Made butter
Molded candles
Preparing applesauce

UNIT TITLE: COLONIAL AMERICA

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies History Colonial The working community past and present	Describe the political turmoil the colonies were involved in with England Describe several characteristics of home, school, and community life of the 18th Century Describe colonial America (people and settlement) Explain the first form of government Explain colonial living conditions Examine and compare five areas in which our present day life differs from colonial life Draw picture of pioneer settlement and modern city Write a description of pioneer life
Music 18th Century	Recognize the music characteristics of the 18th Century Sing songs which reflect pioneer feelings ex. "Dry Bones"

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Role playing experiences Dramatization about man's involvement in his struggle for freedom Listening to pioneer stories Making up stories about Colonial times including Indians and Pilgrims Play on early America Making booklets related to various areas Re-inactment of colonial schoolday Prepare one of four different rooms, the way in which colonial people did	
Choral verses Dances (example, square dance or reel from early times)	

UNIT TITLE: COLONIAL AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art	
18th Century Colonial design	Participate in crafts typical of this time period Make decorative items Design a bulletin board showing how a town is restored Describe what is meant by a restored town Make several examples of crafts typical of Williamsburg's working community Make murals of Colonial America
Math	
Time Computing (by subtracting) Monetary system Measurement Linear measure	Compare travel time in Colonial and modern times Compute time between certain events and the present Recognize examples of money used in the 18th Century and equate it to the value of today's monetary system Measure with measuring spoons and cups, and use the oven Measure in candle making activities Participate in the making of looms and hornbooks

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Weaving baskets Weaving cloth on looms Make colonial hats Reconstruct by mural - Colonial living or town Field trip to Greenfield Village Make a mural showing how a town is restored Making pioneer dolls Decorating room for colonial Christmas	
Colonial cooking Making candles Paper making demonstrations Making hornbooks Soap making	

UNIT TITLE: COLONIAL AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Health	Select proper foods
Language Arts	
Researching	Take notes Locate and utilize information in research text
Reading	Report and read books about colonial America
Spelling	Make a card file
Writing	Write letters Relate in written form characteristics of colonial America (home, communities, schools, clothing, food, etc.) Write a poem
Creative writing	Write experience stories Write autobiographies - as if they were colonial children Participate in a group discussion comparing colonial occupations with those of today

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make corn bread Prepare vegetable soup Make butter	
Write reports Make family trees Reading cookbooks Make autobiography book of themselves as a colonial child Make a card file of words used in connection with Colonial America Write thank-you notes	

UNIT TITLE: COLONIAL AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science	
Change of state (candle-making)	Describe changing state of matter - solid - liquid - solid Describe several spices and their importance
Machines	Describe simple machines used in colonial cooking
Light	Identify and understand the term "candle power"
Animals	List three uses of animals
Plants	Identify and classify five herbs, spices or weeds Draw a spice garden
Weather	Explain what the colonists did during different seasons of year and how their homes were equipped to survive the different seasons

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make candles, either by mold or by dipping	
Compare modern tools with those in colonial times	
Making popcorn	

UNIT TITLE: COLONIAL AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Careers	
Man and his job roles Reasons Their functions The location Tools Characteristics Attitudes they do Managing Planning Producing	Plan a restored town List individual jobs that were required in a town during colonial time Identify handcrafted colonial tradesmen, tailor, shoemaker, etc.
Custom productions of products Raw materials Preprocessing Services Things People	Purchase material Receive material Store materials and products Distribute a product Advertise a product Sell a product

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Making stilts	
Making hand soap	
Making Early American sled	
Making boot jacks	
Spool knitting	
Make looms	
Have a "Trading Day"	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DIPPING CANDLES

II. ACTIVITY FORMAT:

A. Tools and Materials

- 2 tall double boilers
- 2 hot plates
- Pencils
- Stearic acid (2 tablespoons per pound of paraffin)
- Scissors
- 11 pounds paraffin
- Wicking - 10 inches per child
- Coloring tablet

B. Human Aides and Resources

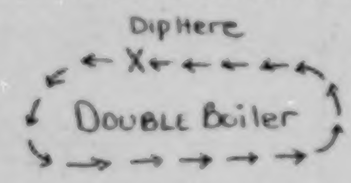
One adult at each double boiler

C. Procedures for this activity (with helpful hints)

1. Show filmstrip: Craftsmen of Colonial Virginia.
2. Show slides: Craftsmen of Colonial Virginia.
3. Prepare wicking by cutting a desired length, knotting at one end, tying the other to a pencil.
4. Prepare wax before class according to recipe: 20% stearic acid, 80% paraffin (melted but not too hot).
5. Instruct individuals to dip their wick in the wax making sure to hold it straight after - wait a few minutes and then dip again.
6. Hang to harden - 2-3 hours.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

This is a very slow process. The activity took two hours and most candles were only about 3/4 of an inch in diameter. An easy way to organize the activity is as follows:



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING CANDLES - MOLDED

II. ACTIVITY FORMAT:

A. Tools and Materials

Candle wax
2 coffee cans
red and green crayons
2 hot plates
Paper cups
Candle wick
Paste sticks
Ladle

B. Procedures for this activity (with helpful hints)

Melt candle wax in coffee containers. Melt red crayon to color one container of wax. Use green crayon to color the second can of candle wax. Pour into individual styrofoam cups. Cut wick so that enough is left at top to roll on paste stick. This will keep it from falling down in wax. Let this dry and then tear off paper container when candle is hard.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

A DAY AT MILLER SCHOOL - GREENFIELD VILLAGE - 50¢ per pupil

II. ACTIVITY FORMAT:

A. Human Aides and Resources

Learning Resource Teacher, Student teacher and parent drivers were used in addition to teacher.

B. Procedures for this activity (with helpful hints)

Miller School is the (restored) school Henry Ford attended as a child. The village supplies McGuffy Readers and Eclectic Spellers, Dunce Caps, willow sticks, etc. We pumped our own water. The children sat in desks typical of the time and dressed appropriately. The day was conducted as it would have been 100 years ago. Typical of a one-room school house.

OUR DAY

I. Opening Exercises:

Songs
Pledge of Allegiance

II. Recitation Period:

A. Oral - reading from McGuffy Readers in small groups.

B. Seat work

1. Math drill on slate boards
2. Memorize a poem
3. Penmanship - writing in copy book
4. Sewing cards

III. Lunch - Recess

IV. Opening Exercises

Choral Reading
Short Plays

V. Blacksmith Demonstration (provided by Village)

VI. Spell-down

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

COLONIAL HATS

II. ACTIVITY FORMAT:

A. Tools and Materials

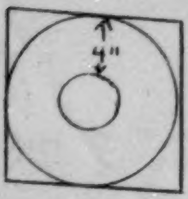
Scissors
Rulers
Pencils

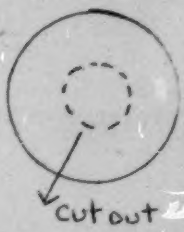
12" x 12" black construction paper
12" x 12" white construction paper
White paper doilies 12" x 12"

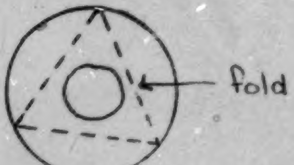
B. Procedures for this activity (with helpful hints)

Men's Tricorn Hat

1. On a 12" x 12" piece of black construction paper draw a circle in the center (4 inches in diameter).
2. Draw another circle 4 inches larger than the first and cut along this line.
3. Cut out center circle. Fold to make a Tricorn hat.

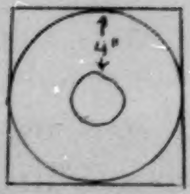


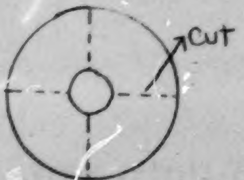


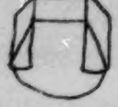


Women's Colonial Hat

1. Draw a circle 4" in diameter in the center of white construction paper.
2. Draw a circle 4" larger than the first.
3. Cut around the larger circle.
4. Cut slits to the smaller circle.
5. Fold and paste or staple to form a cap. (It will look like a lady's pill-box hat)
6. Trim with lace doily.







HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PREPARING APPLESAUCE

II. ACTIVITY FORMAT:

A. Tools and Materials

- Knives
- Pots
- Apple Corer
- Measuring utensils
- Spoons
- Apples
- Sugar, Cinnamon, Lemon
- Water
- Hot plate

B. Human Aides and Resources:

Mothers

C. Procedures for this activity (with helpful hints)

One small group at a time core and peel apples. Place in small amount of water in large pot on hot plate. While a couple of kids are constantly stirring and mashing the apples, others are adding ingredients such as sugar, cinnamon, and lemon.

It's a good idea to have help with this such as a mother or two or an aide. Another helpful hint would be to have a masher (the kind used for potatoes) for mashing the apples down as they cook.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children are able to see and taste a finished product. They could very easily help at home with this same kind of activity.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING VEGETABLE SOUP

II. ACTIVITY FORMAT:

A. Tools and Materials

Large cooking pan	Hot plate
Knife	Individual dish and spoon
Ingredients	

B. Human Aides and Resources

Teacher and students - only

C. Procedures for this activity (with helpful hints)

Wash, peel and cut vegetables. Combine large can of tomato juice, 1 can of tomatoes, 5 potatoes, 5 carrots, 5 onions. Cook until vegetables are soft.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Much interest and they loved the soup. Good learning experience.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

COLONIAL COOKING - WILLIAMSBURG GINGER CAKES

II. ACTIVITY FORMAT:

A. Tools and Materials

Oven
Cooking utensils
Cookie cutters
Cookie sheets
Paper
Mixing bowls
Measuring cups
Rolling pins
Spoons
Recipe

B. Human Aides and Resources

Parents' aides for each small group

C. Procedures for this activity (with helpful hints)

1. Show filmstrip: Cooking in Colonial Days
2. Discussion about spices
3. Cream lard, sugar and molasses
4. Sift flour, ginger, salt and soda into mixture
5. Add enough flour to make dough stiff
6. Roll very thin
7. Cut with cookie cutters
8. Bake on buttered tins in a quick oven
9. They burn easily

RECIPE

Recipe for each batch of cookies made -

1/2 cup lard
4 cups flour
1 teaspoon soda
1/2 teaspoon salt
2 cups brown sugar
1 tablespoon ginger
2 cups light molasses

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING MOLASSES CAKE (Similar to Gingerbread)

II. ACTIVITY FORMAT:

A. Tools and Materials

Mixer
Mixing bowl
9 x 12 baking pan
Molasses
1 egg
Flour
Baking soda
Cinnamon
Ginger
Cloves
Whipped cream

B. Human Aides and Resources

Mother volunteers

C. Procedures for this activity (with helpful hints)

Recipe -

1/2 cup sugar
1/2 cup butter
1 cup molasses
1 egg
1 1/2 teaspoon baking soda
1 1/2 teaspoon cinnamon
1/2 teaspoon ginger
1/2 teaspoon cloves
2 1/2 cup flour
1 cup hot water

Cream butter and sugar. Add egg and beat. Add dry ingredients sifted together alternating with hot water.

Bake at 350° 35-40 minutes in 9 x 12 pan.

Serve with whipped cream.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

POPCORN

II. ACTIVITY FORMAT:

A. Tools and Materials

Materials necessary for each item to be made:

Popcorn - on ears with husks (at times available at Pop's)

B. Procedures for this activity (with helpful hints)

List (chronologically) a step by step procedure for each activity being made in the unit.

Husk corn
Allow corn to dry on ears (several weeks)
Each person has 2 ears of corn
Rub dry corn ears together
Collect loose corn
Pop the corn

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING CORN MUFFINS (SOUTHERN)

II. ACTIVITY FORMAT:

A. Tools and Materials

Corn meal	Buttermilk
Salt	Oleomargerine
Soda	
Eggs	

B. Human Aides and Resources

Mother volunteers

C. Procedures for this activity (with helpful hints)

Recipe -

2 cups corn meal
pinch of salt
1/3 teaspoon soda
1 egg
1 cup (approximately) buttermilk - enough to make consistency of cake mix
Pour into hot greased muffin tins. Bake at 400° for 20 minutes

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Excellent. Muffins were served at our Southern Colonial Dinner.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING CORN BREAD

II. ACTIVITY FORMAT:

A. Tools and Materials

Mixing bowl
Spoon
Eggs
Corn meal
Buttermilk
Crisco
Salt
Muffin tins

B. Human Aides and Resources

2 parents

C. Procedures for this activity (with helpful hints)

Divide class into 4 groups. Each group made a pan of corn bread.

2 cups corn meal, 1 cup buttermilk, 1 egg and pinch of salt.
Mix together and bake in muffin tins at 375°.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children enjoyed activity and liked the bread. Good learning experience.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING BUTTER

II. ACTIVITY FORMAT:

A. Tools and Materials

Whipping cream (room temperature)
Salt
Fruit jar
Mixing bowl
Spoon

B. Human Aides and Resources

Mother volunteer

C. Procedures for this activity (with helpful hints)

1. Shake cream in sealed fruit jars.
2. Pour off buttermilk (save for making corn muffins).
3. Wash butter with cold water until water is clear.
4. Add salt to taste.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Activity turned out very well. Butter was used for our Southern Colonial Dinner.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HORNBOOKS

II. ACTIVITY FORMAT:

A. Tools and Materials

1/4" plywood
Oak tag 6" x 6"
Shellac
Clear contact paper
Black markers
Paint brush

B. Human Aides and Resources

Two parents to supervise and work with dremmel saw

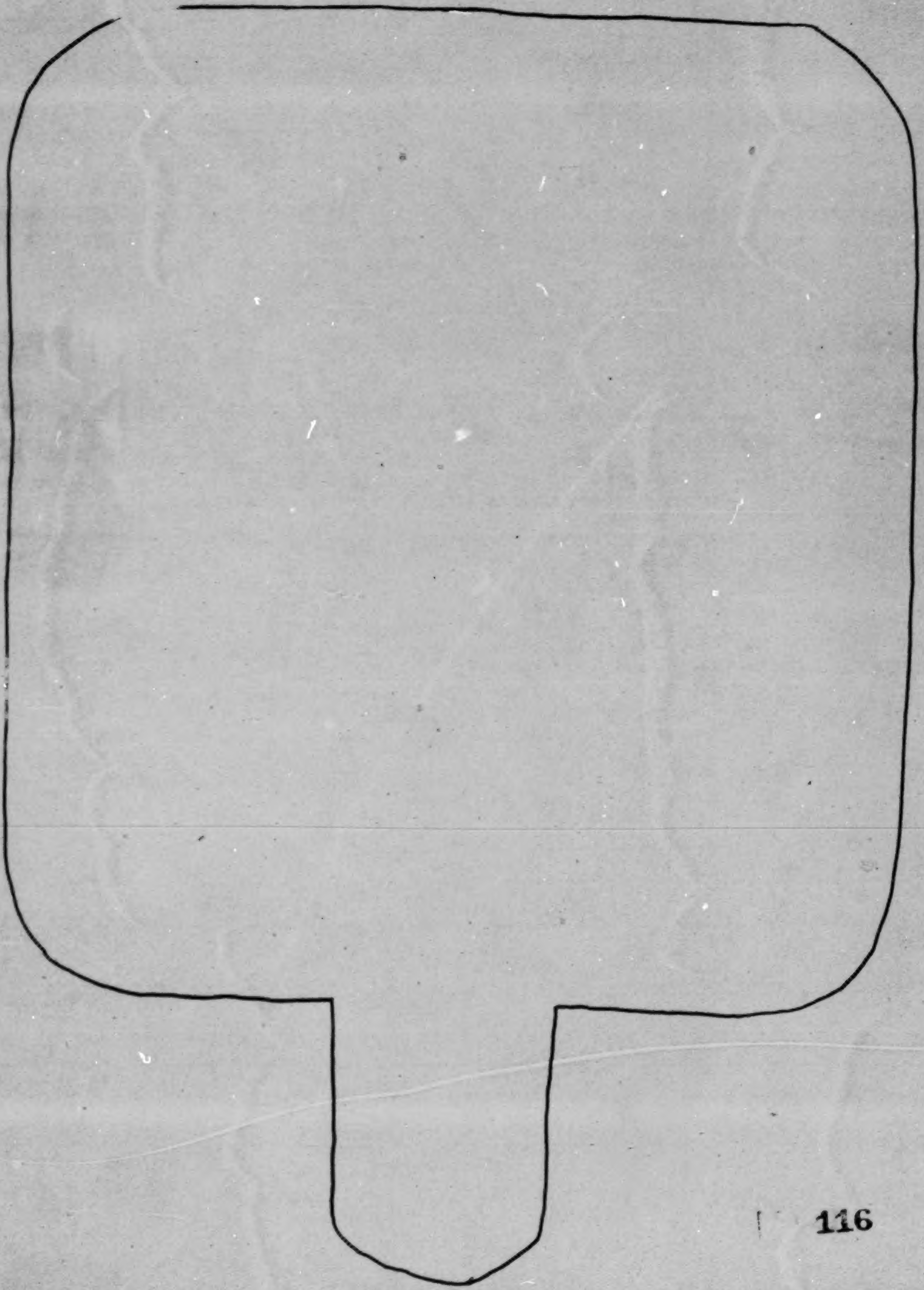
C. Procedures for this activity (with helpful hints)

1. Trace pattern on plywood and cut using dremmel saw.
2. Shellac wood.
3. Draw lines on oak tag.
4. Pencil in alphabet and numbers from 1 - 10.
5. After letters have been checkec by teacher, go over with black marker.
6. Put clear contact paper over oak tag and attach to wood.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children learned to use dremmel saw.
Children learned to measure lines.

Hornbook pattern on back of page.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

WEAVING BASKETS

II. ACTIVITY FORMAT:

A. Tools and Materials

Water	Reeds
Wastebasket	String

B. Procedures for this activity (with helpful hints)

1. Show filmstrip - Homespun Linen
2. Show realia - Loom
3. Show slides - Craftsmen of Colonial Virginia
4. Soak the reeds in water overnight (wastebasket is excellent)
5. Each individual starts with six reeds 24" long
6. Place three spokes on a table then put the other across the middle and on top of the first three
7. Select a long piece of string to wrap around the base in an under/over manner
8. Separate the groups of 3 spokes into groups of 2
9. Select a long piece of reed to start weaving the base using the same over/under method
10. After the base is 3-4 inches wide, separate the spokes again and continue weaving
11. As the weaving piece of reed becomes smaller, add another near the short end
12. As the base becomes wider, bend the spokes upward to form the shape of the basket
13. To finish the top, turn the end of each spoke down and weave it into the basket

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

This took several afternoons. Remind the children to weave tightly and to keep soaking the reeds and their baskets as they go along. Baskets may be shellacked when finished.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LOOM MAKING

II. ACTIVITY FORMAT:

A. Tools and Materials

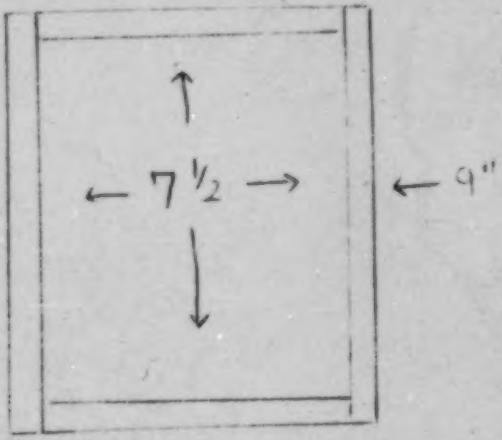
2 pcs. 3/4" x 3/4" x 7 1/2" wood
2 pcs. 3/4" x 3/4" x 9" wood
6 d finishing nails
1" x #18 wire brads
3/4" x #16 wire brads

B. Human Aides and Resources

Two Eastern Michigan University students

C. Procedures for this activity (with helpful hints)

1. Using 6 d finishing nails, nail wood frame together.
2. Lay out and mark 20 equally spaced points on each side of the frame.
3. Drive a #18 wire brad at each point, leaving 1/2 " of the brad sticking up.



III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Projects turned out very well and children were eager to begin weaving.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TRADING DAY

II. ACTIVITY FORMAT:

A. Tools and Materials

Toys, jewelry, or any used item child wishes to exchange.

B. Procedures for this activity (with helpful hints)

1. Send a letter indicating the class will be having a trading day similarto those held in colonial times when colonists exchanged products for services and items needed.
2. On the trading date, the children circulated by rows exchanging items.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

So great and exciting was the activity that we held trading day twice!

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MURAL - RESTORED TOWN

II. ACTIVITY FORMAT:

A. Tools and Materials

- Scissors
- Pencils
- Rulers
- Crayons
- Paint
- Map of Williamsburg, Virginia
- Map of Greenfield Village
- Reference Books
- Magic markers
- Construction paper
- Glue
- Butcher paper

B. Procedures for this activity (with helpful hints)

1. Field trip: Greenfield Village
2. Show slides of the craft shops of Williamsburg, Virginia
3. Show filmstrip: Craftsmen of Colonial Virginia
4. Discuss advertising and how individual craftsmen advertised their products
5. Have individual students select a craft and design an advertisement to hang outside their shop
6. On the butcher paper, recreate the city of Williamsburg, Virginia
7. Hang the shop signs

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

The children enjoyed this activity, particularly designing shop signs.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING PAPER FROM PULP

II. ACTIVITY FORMAT:

A. Tools and Materials

Egg beater
2 pieces of plywood
Wooden spoons
Water
Mold and deckle
Toilet tissue
Felt
Iron
Dish pan
Scissors
Starch
Mixing bowl

B. Human Aides and Resources

Parent aides to assist small groups

C. Procedures for this activity (with helpful hints)

1. Tear tissue into small bits, placing shredded bits into a mixing bowl.
2. Add water to mixing bowl.
3. Beat with egg beater.
4. Fill dish pan with water.
5. Add one cup of starch.
6. Add mixing bowl contents to dish pan.
7. Place the mold and deckle in the bottom of dish pan.
8. Place a piece of felt on the top of the mold and deckle. Flip over, leaving a piece of felt with the tissue on top.
9. Squeeze out excess moisture by placing the felt and tissue between two pieces of plywood and standing on it (outside).
10. Allow to dry.
11. Remove felt pieces.
12. If needed, iron the paper.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

RECYCLING PAPER BY HAND

II. ACTIVITY FORMAT:

A. Equipment

1. Finely meshed wire screen 5' x 6 1/2".
2. Aluminum pan 5" x 6 1/2" x 1".
3. This pan can be made from a frozen food container. Any approximately sized pan can be shaped to these dimensions. Cut out the center of the base of the pan, leaving a 1/2" base all around the pan. The screen will rest on this base.

   Aluminum pan 3 1/2" x 5" x 1"

   Cut out the entire base of this frozen food container, leaving the four sides in an unbroken rectangle. Bind this pan as follows: Use 1" adhesive tape around the four sides, with 1/2" on the inner side and 1/2" on the outer side of the base edge. Repeat the binding with a second strip of tape, this time going up only 1/4" on the four sides, both outside and inside. The additional edge of adhesive tape which hangs below the base rim of this pan will serve to hold in the pulp when you are working.
4. Basin, large enough to hold ten quarts of water.
5. Cleansing tissue - 30 double sheets.
6. Cellulose sponge 4" x 6" x 1".
7. Several packages of white blotters.
8. Laundry starch.
   One tablespoon of instant laundry starch mixed with two cups of water.
9. Egg beater.
10. Electric iron.
11. Tray or a work surface which can take moisture.
12. Scissors

B. Resources

American Paper and Pulp Association
122 East 42nd Street
New York, New York

C. Procedures for this activity (with helpful hints)

1. Tear 30 double sheets of cleansing tissue into small pieces and place in the basin. Cover the tissue with 1 1/2 quarts of water and stir for about ten minutes until thoroughly dissolved to pulp.

2. Add the tablespoon of starch dissolved in two cups of lukewarm water, and 8 quarts of water to the dissolved pulp. Beat with the egg beater for a few minutes until tissue fibers are thoroughly dispersed in the water.

3. Place the small pan, tape sides down, on the screen which is the base of the larger pan. Holding both, dip them into the pulp mixture edge-wise, and turn to horizontal position when submerged. Raise both pans, retaining a thin layer of pulp in the smaller one within the framework of the tape. Clear the outer pan of all extra pulp, gently with your finger. The extra pulp should be returned to the basin if you plan to make the 20 sheets.

4. Remove the inner frame and lift the screen from the outer frame. Place the screen with the pulp on it on the sponge, with the screen between the sponge and the pulp.

5. Gently press the pulp and the wire mesh on the sponge with a white blotter until the moisture is absorbed. Lift up the blotter carefully and you will find that the rectangle of pulp has adhered to it from the mesh screen.

6. Place a second blotter over the pulp lying on the first blotter. Press again to absorb the moisture that still remains.

7. Place the damp sheet between two new blotters and iron it with a warm iron (not hot). Trim the edges all around with a scissors. Your paper will be about 3" x 4 1/2" and you can write on it with a ball point pen.

8. Use the egg beater frequently to keep the pulp thoroughly mixed.

9. By placing a blotter between each wet sheet you can make a pile of about ten. Put pressure on this pile for several minutes, using wood blocks.

10. For a class of forty pupils, double the amount of tissue, starch, and the size of the pans accordingly.

11. To make larger sheets of paper, start with a large size screen and increase the size of the pans accordingly.

12. Tinted paper can be made by adding vegetable dye to the pulp and water mixture.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

This activity can be conducted in the classroom with the equipment described below. Using the dimensions suggested here, you can produce about 20 sheets of paper, 3" x 4 1/2".

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

STILTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Saw
Screw driver
Sandpaper

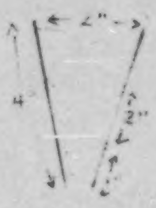
4 - 1 1/2" #8 wood screws
2 - 2" x 2" x 6 ft. wood
2 - triangle shaped blocks of wood - 2 in. thick
6 - 2 1/2 in. screws

B. Resources

Singing Wheels

C. Procedures for this activity (with helpful hints)

1. Sand the two 6 ft. pieces of wood.
2. Sand the two triangle blocks of wood.
   Screw one triangle block to each long piece of wood.
3. Drill 2 holes 1/4" diameter through the triangular blocks as per sketch.



4. Wood screw the triangular blocks to the stilts 1' from bottom of stilt.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SLED - EARLY AMERICAN

II. ACTIVITY FORMAT:

A. Tools and Materials

Square measurer
Saw
Hammer
Sandpaper

Wood
Rope
Lumber
Screws 1 1/2"

B. Resources

Singing Wheels

C. Procedures for this activity (with helpful hints)

1. Cut pattern for sled
2. Sand wood
3. Screw runners to top
4. Brace runners and top (from underside)
5. Sand wooden runners
6. Wax runners
7. Attach rope

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SPOOL KNITTING

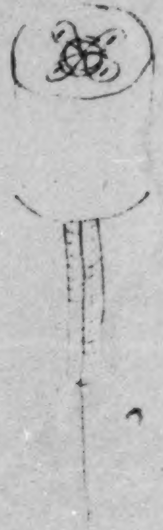
II. ACTIVITY FORMAT:

A. Tools and Materials

Wooden spool	1 - 3" nail
4 - 1/2" nails	Yarn

B. Procedures for this activity (with helpful hints)

1. Large size spool
2. Place 4 - 1/2" nails in a square around the hole (6 nails may be used)
3. Thread yarn from bottom through the hole
4. Circle nails - once
5. Circle nails - another time
6. Pull bottom loop over top loop (use long nail)
7. Continue by pulling weaving through the center hole



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BOOTJACKS

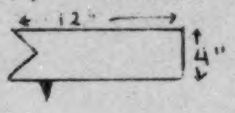
II. ACTIVITY FORMAT:

A. Tools and Materials

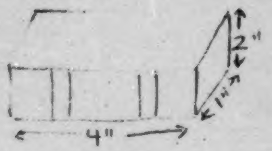
1 crosscut saw
2 #6 - 2 1/2" Slat head wooden screws
1 piece 3/4" x 4" x 12" pine
1 piece 1" x 2" x 4" pine

B. Procedures for this activity (with helpful hints)

Measure, draw, and cut a 3" V in one end of the 12 inch piece of wood (as shown in sketch)



Four inches from the "V" end fasten the 1" x 2" x 4" lift to the bootjack base. First drill 2 1/4" holes through the block (see sketch).



Then using the appropriate wood screws, fasten the lift to the base of the bootjack.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HAND SOAP

II. ACTIVITY FORMAT:

A. Tools and Materials

Glass gallon jar
Enamel pan (large)
Wooden spoon
1 wooden box - about 2 ft. x 1 ft.
1 can lye
8 lb. grease

B. Human Aides and Resources

Four to six people. One adult to help pour lye and work with the small group of children.

C. Procedures for this activity (with helpful hints)

List (chronologically) a step by step procedure for each activity being made in the unit:

1. About 8 pounds of grease saved from cooking
2. Heat just enough to pour
3. Strain grease
4. Place grease in double amount of water
5. Boil water and grease at least 20 minutes
6. Set aside and cool
7. Take hardened grease from top of water
8. Use 6 pounds of grease
9. Heat just to lukewarm - use enamel dish
10. Put 5 cups of water in glass jar
11. Slowly empty one can of lye into 5 cups of water
12. Stir with wooden spoon
13. Allow to cool
14. Slowly pour cooled lye into lukewarm grease (6#)
15. Stir with wooden spoon until mixture is like whipped cream
16. Pour mixture into wooden box which has been lined with the wet sheet
17. Cover mixture with edges of wet sheet
18. Let stand 48 hours to one week
19. Cut into cakes
20. Yields 30 cakes

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Long process

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DOLLS

II. ACTIVITY FORMAT:

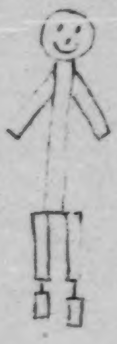
A. Tools and Materials

Hook screws
1 ft. of 1/2 in. doweling
Cloth
Yarn
Bread & glue for clay (See Mother's Day Flower directions)
Wire - small
Saw

B. Procedures for this activity (with helpful hints)

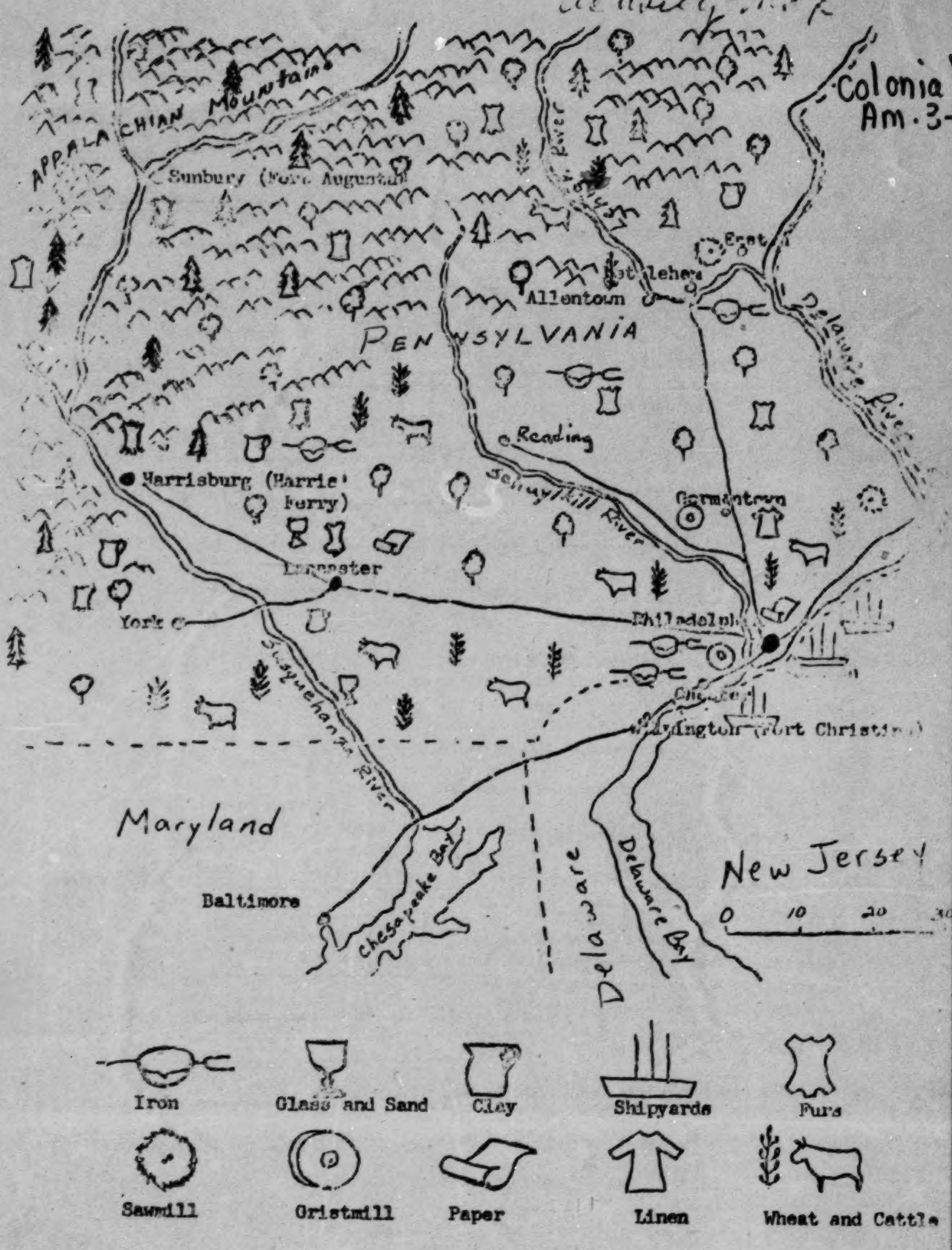
List (chronologically) a step by step procedure for each activity being made in the unit.

Make a head with face from clay
Put yarn hair on head (pin knotted yarn to head)
Allow head to dry
Cut doweling in sections to form a doll
Put hook screws on each end of each piece of dowel
Connect each section of doll by wiring through the center of the hook screw
Cut and sew clothes for doll



Activity map

Colonia
Am. 3-


APPALACHIAN Mountains
Sunbury (Fort Augusta)
River
Easton
Bethlehem
Allentown
PENNSYLVANIA
Delaware River
Reading
Schuylkill River
Germantown
Harrisburg (Harris' Ferry)
Lancaster
York
Philadelphia
Susquehanna River
Chester
Wilmington (Fort Christina)
Maryland
Chesapeake Bay
Baltimore
Delaware
Delaware Bay
New Jersey
0
10
20
Iron
Glass and Sand
Clay
Shipyards
Furs
Sawmill
Gristmill
Paper
Linen
Wheat and Cattle

QUESTIONS TO GO ALONG WITH TEXT NAME ______________________________

THE PILGRIMS - SETTLING AMERICA

3rd pp. 72-82

The Pilgrims sailed from ____________________ on the ____________________ continent in 1620. The Mayflower, their ship landed in ________________________ in December instead of _______________________ on the North __________________ continent. (Check the maps.) They had to adapt to the _______________ climate of Massachusetts which was ______________________ than winter in Virginia and England. Their first important job was to ____________________________________. The first houses were made in caves with roofs of ___________________ and walls of ______________________ with a little ___________________ in the roof where smoke could escape. Many became ___________________________ in their damp shelters. Because of cold, sickness and ____________________________ only __________________ were alive in the spring of the one hundred and two people who had come. The survivors did not chose to sail with the Mayflower when the crew returned.

Their biggest problem was to get _______________________. The Indian _______________________ taught them what would grow. Of these crops, ____________________________ was the most important.

During the first summer, they built __________________________shelters of _________________________. By the time _______________________ came again, they would know what to expect.

The Pilgrims also had to learn to ___________________________ for food. Squanto taught them how to use __________________ and ______________________. He showed them how to make fishhooks from ___________________________. They learned how to dig for clams and soon became expert ______________________.

When autumn came, it was time for the __________________. This year there was enough ____________________for the winter. The Pilgrims had the first

____.

NAME ______________________________

3rd pp. 72-82

In less than a year in ____________________________________, the Pilgrims adapted to their new environment by ___________________________________ some of their cultural traits.

Ten years after the Pilgrims landed, another group from ______________________ arrived called the Puritans. They settled at _________________________ and the Massachusetts Bay area. The Puritans built houses like those the Indians lived in from ____________________________________, bark and poles. Unlike the Indians, the Puritans added a __________________________________ and a door.

Time went on and warmer and stronger houses were built. Soon Plymouth and Salem were filled with wooden houses, churches and stores.

Harcourt, Brace, Janovich 3rd Grade NAME ______________________________

The Puritan Woman pp. 89-95

The Puritan woman had special work to do. Her daughters worked beside her learning the __________ of a woman. In the Puritan house there was a large ________________ used for warmth, for ______________ and for ______________. It took a great deal of ___________________.

The main food was ___________, the kernels were used for __________ and the cobs for ______________. If meat was to be roasted, a younger boy might turn the _____________________, it took a long time. (This was part of his role.)

A _____________________ was expected to make clothes from start to ___________. ______________ and wood were used as clothing material. Both had to be ____________ and straightened and ______________ into thread, and then ________________ into cloth on a loom.

Another job was making soap. ____________ and _____________ were boiled in a big kettle outside until soft soap formed. _______________ made soap form faster and made it harder but it was expensive.

Most candles were made of __________ __________, but they did not ___________ good when they were burning. Good-smelling candles could be made from ______________. The ______________ was dipped many times into soft wax. It had to ________________ before it was dipped again.

In church, if a housewife were lazy, the minister might give her a _____________ in front of all her neighbors. If the Puritan woman was not a good housewife, her family might go ___________________, her daughters would not learn their roles and might grow up to be bad ______________________. Find a picture of "stocks, dunking bench", and any other punishment used. Sketch these below.

Harcourt, Brace and Janovich 3rd Grade NAME ______________________

pp. 124-130

In 1490 there were ______________ of communities in America. ____________ a very large city was capital city of the ____________ Empire in Mexico. There were also very small communities. The ____________ and ______________ lived in sun dried houses in the regions of Arizona and New Mexico. The ______________ farmed the land with ___________ and ______________ sticks. Their main crop was ______________.

In the middle of the continent, buffalo grazed on the grass covered plains. The Plains Indians, on foot, hunted them for ____________ and clothing. In the east, there were settled communities, whose men were hunters and fishermen.

These communities were _____________ and _____________ apart. Along the eastern coast of North America lived many Algonquin groups. Their women were _________________. Squanto was an ______________.

Each Indian group had its own __________________. Different Algonquin ________________ could not understand each other. They did not interact with ____________ other because they could not understand each other's ____________.

The ______________ traits of each group changed very little.

Two groups and a discovery pp. 130-132

On October 12, ______________, people on the island of Cuanohani discovered strangers on their shores. They had different ______________ traits and different ________________ and spoke a different ________________. The strangers were an Italian explorer ______________________________ and his crew who had sailed westward from Spain for __________________ months in the ____________, the ___________ and the ______ ____________. They had set off to find a new ______________ ____________ to India!

THE CHANGING MAP pp. 134-138

A large group of communities is called a ____________________, if they have many shared ____________________ such as a common religion and a shared language.

Columbus went back to ______________________ with a cargo of some Indians, a few _________________ and a little gold. The rulers sent soldiers to find ________________. To get more gold, ____________________ conquered Tenochtitlan in Mexico. The soldiers stayed and became _______________________ in the West Indies and South America.

France and England decided to search for __________________ in other parts of ______________________________. John Cabot sailed for the ____________ ____________, Jacques Cartier for the ___________________, and Hernando DeSoto and Columbus for the _________________________________. As they explored, they made new ________________ to show what they learned about the Earth.

People from the African continent came to the New World. They were forced to. From African slave traders, thousands of ____________________ people were bought for the farms in the _______________________ and ______________________ colonies. In Africa the men were skillful ______________________. Their hard work changed thick ____________________ into ___________________ and towns. Besides gold, hundreds of Spanish _________________ came to teach the Catholic religion to the Indians. Through ___________________________ some Indians changed their cultural environment by taking this new religion.

3rd Grade - Changing Ways pp. 139-144

In 1635, a group from ______________ settled near the mouth of the __________ River. They built the first ______________ cabins in the new world for which the only tool needed was the ________________. Long, straight trees ______________ and __________________ were used. Trees were a ___________________ for building houses and furniture, something in the ___________________________ to be used. Later the _________________ in Pennsylvania and the _________________ in Ohio, Kentucky and Illinois built log cabins. This behavior change is an example of __ _ _______________________ of people.

All people first need __________________, ________________, ________________ and clothing. The Pilgrims adopted ______________ ways to get food. The Spaniards planted European crops and raised animals suited to the ______________ regions of Spain. Francisco de ________________, an _________________, found the Seven Cities of Cibola in the Southwest, but found it wasn't made of __________________. The Indians found a new resource--______________________, which they used for meat and their _____________________ for clothing. The Indians had raised cotton before; now they were ___________________ of both cotton and wool.

In the Quebec region, the French interacted with the ________________________. The French trappers adopted the soft Indian ______________________ and the deerskin ________________ and _________________. The Indians began to use ______________ and __________________ made in Europe. People of each group took on ____________ ____________________ that helped them adapt to the ______________________.

Ideas and Languages Meet pp. 146-149

The colonists brought not only tools and clothing, but ______________ and values. Although the Puritans valued their ______________ they did not try to teach it to the Indians. Another cultural trait of the English colonist was ______________ ______________. They gave beads and cloth in exchange for some land -- they thought. Owning land was not a cultural trait of the ______________. They thought that the tribes who lived near a piece of land were ______________ to use it. They thought the beads and cloth were gifts.

The settlers and the Indians had a conflict between their two ideas, the idea of ______________ ______________ and the idea of ______________ ______________ of land for the tribe whose hunting ground it was. The settlers killed many Indians with ______________ and the Indians killed settlers with ______________ and guns. Because the Indians and English had few or no ______________ ideas and values they did not become a part of each others communities.

The Swedish had cultural traits similar to those of the ______________. As the two groups interacted the Swedish learned to speak ______________. By 1690 there were many different groups along the ______________ coast of North America from ______________, ______________, ______________ and Wales. There were also groups from West Africa, ______________ and Spain as well as many groups of Indians. The people from England far outnumbered the people who spoke other languages so English became the ______________ language. As groups ______________, most people learn to speak a common language of the community.

The Past and Your Language pp. 151-158

In 1542 the ____________________ explorer DeSoto claimed the southern part of the Mississippi Valley for Spain, (p. 136) but they were busy fighting wars in Europe so it was not colonized by them. In 1682, the French explorer Robert __________________________ sailed down the Mississippi from the north. When he reached the Gulf of ________________ he claimed the whole Mississippi Valley for ____________________. He named it __________________ in honor of King Louis XIV. __________________ was spoken there. Today in New Orleans there are French names on the ____________________ and people celebrate ______________ ______________ a French holiday. _______________ is a combination of French and Spanish. Some French words we use today are: avenue, ________________, ____________ and menu. There are also Spanish words we use such as __________________, ______________ and patio.

Do you know the meanings of ____________________, __________________, ______________, __________________, ______________ and _____________? They are from the Dutch language! (p.155) Holland in 1609 sent the explorer _____________ _______________into the Hudson Valley region. He was hunting for a __________________ passage through America to the ____________Indies. Instead he opened up a region of farmlands and a source of _____________. They called their colony New ___________________. They grew grains and cattle and used ______________________ for grinding grain. In 1664 the __________ took over the Dutch colony. Our language grew and changed. Some people call it ______________________ _________________.

Europeans kept the European _________________ that were useful in the New World. __________________ was the word used for the flat-topped hills of the Southwest; it means _________________. The grasslands of the Midwest were

The Past and Your Language (continued)

called ______________________, the French word for meadow. Algonquin Indian words for some things were changed because they were hard to say; some examples are segawkw to skunk, rahaugcum to ____________________ and apposum to _____________. Other Algonquin words we use are squash, ___________________ and persimmon.

As groups from different ______________________ meet in a new _____________ region, they may change their cultural traits. The name of your town, the foods you eat, the ___________________ you celebrate all began long ago.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: GOVERNMENT: DISCOVERY AND EXPLORATION OF NORTH AND SOUTH AMERICA

GRADE LEVEL: 3-4

GENERAL OVERVIEW: Children identify with heroes. This unit is developed to build an understanding of how and by whom North and South America were opened to white man. In order to understand the interactions between groups and individuals it is important to study the Indian kingdoms: Aztecs, Mayans and Incas of Central and South America and the interaction between them and the Spanish conquistadores.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
The Mayans
The Aztecs
The Horse in the New World
Indian Arts and Crafts
Building Center
Follett Publishers: Explorers - booklets
Pockets on Exploration, Discovery
The Social Sciences: Concepts and Values Level 3 - Harcourt, Brace & World, pp.126-138, 139-145, 151-157

Films:
Age of Discovery: English, French and Dutch Exploration
Age of Discovery: Spain and Portugal
Canada's History: Colony to Commonwealth
Discovery and Exploration
French Explorations in the New World
Story of Christopher Columbus
The Incas
The Viking: Life and Conquests
American Indians Before European Settlement

Filmstrips:
Marco Polo
Age of Exploration
Balboa
John Cabot
Coronado
Cortes
Samuel Champlain
DeSoto
Story of Hernando DeSoto
Story of Christopher Columbus
Discovery of America (R)
Francis Drake
Ponce de Leon
Early Explorers of North America
Henry Hudson
Ferdinand Magellan
Story of Father Marquette
Hawaii: Before the White Man (R)
Hawaii: Discovery and Development
Exploring of America (R)

Realia:

- Castanets
- Guitar

2. Field Trips:

- Detroit Historical Museum
- Cranbrook Science Museum

3. Human Resources:

- Mexican Consulate
- Indian lore expert
- Parents

4. Activities:

- Making Aztec Prints
- Interviewing People from Central-South America
- Make Indian head ornaments
- Make map of "lands claimed by North America"
- Role play first encounter between Algonquin Indians and the Spanish/Pilgrims

UNIT TITLE: GOVERNMENT: DISCOVERY AND EXPLORATION OF NORTH AND SOUTH AMERICA

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
Explorers of North & South America	Answer 70% or more on a teacher made test about the Explorers (by 60% of the class)
Different cultural traits of Indians, settlers - English and Spaniards	List 2 traits of the Indians which caused misunderstandings by the English settlers
Indian stereotype	Name 3 of the main Indian cultures encountered by the Spaniards
Language	
Words adopted into American English language from: Indian Dutch French Spanish Swedish	Find 2 or more words from the following languages used in our language: Indian Dutch French Spanish Swedish Algonquin Indian
Research and write a report	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Show movies listed Have children view the listed filmstrips related to their explorer/ discoverer/ Indian with partner Class discussion to identify: Problems of conquerors Problems of Indians Problems of Settlers Adaptation of cultures Collect, display, construct realia-type items from the various cultures Each pair will make a display and written report Share their above work with other rooms in the school	Movies Filmstrips Detroit Historical Museum Cranbrook Science Museum Visit Mexican Consulate
Prepare menus for one Spanish and an Indian meal Investigate and assemble appropriate costumes Make and serve meals	

UNIT TITLE: GOVERNMENT: DISCOVERY AND EXPLORATION OF NORTH AND SOUTH AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Music Listen Beat Drum	Identify a Spanish guitar music Recognize and repeat 2 typical drum beat patterns of the Indian
Art Display Aztec print Weave Indian design	Name 5 items that the Indians adapted into their culture from the Spaniards Participate in a class discussion to separate fact from fiction in Indian culture e.g. ownership - "Indian giver" Construct a display of his explorer/ discoverer, Indian group Write a report of his explorer/ discoverer, Indian group to go with his display

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Listen to music of the Indians and Spanish	
Make maps of lands claimed by North America Do the Word search puzzle on discoverers/explorers Make Aztec prints	

UNIT TITLE: GOVERNMENT: DISCOVERY AND EXPLORATION OF NORTH AND SOUTH AMERICA (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Careers	
People and their job roles	Identify the techniques related to farming learned by the settler from the Indians
Tools	Identify tools adopted by the Indians from the Spaniards Identify tools adopted by the settlers from the Indians
Functions Characteristics	Identify the job roles of the male and female Indians and the reason for both
Products	Identify foods typical of Spaniards and Indians
Managing	Describe the system of management that made the Aztec's civilization function

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Take teacher-made test	

EXPLORERS OF NORTH AND SOUTH AMERICA

The Vikings
- Eric the Red
- Leif Ericson

The Mogols
- Marco Polo

Portugal
- Prince Henry the Navigator
- King John
- Vasco da Gama
- Bartholomeu Dias

Spain
- Christopher Columbus
- Ferdinand Magellan
- Francisco Pizzaro
- Ponce de Leon
- Amerigo Vespucci

Italy
- Giovanni da Verrazano
- Hernando Cortes
- Hernando de Soto
- Francisco Coronado
- Vasco de Balboa

France
- Robert de La Salle
- Jacques Cartier
- Pere Marquette
- Samuel de Champlain
- Joliet

Holland
- Henry Hudson

England
- John Cabot
- Henry Hudson
- Sir Francis Drake
- Martin Frobisher

Indian Civilizations
- Mayan
- Inca
- Aztec
- Algonquin - Squanto

FIND ALL THE WORDS YOU CAN

D	I	S	C	O	V	E	R	E	R	S
O	N	O	T	F	O	S	S	I	L	E
C	S	O	F	F	I	C	E	R	A	R
K	I	R	T	I	N	A	L	E	A	P
A	D	R	I	C	H	L	A	C	T	E
T	N	O	M	I	N	A	T	I	O	N
H	C	A	C	A	O	T	O	P	P	T
S	I	D	E	L	O	O	M	E	A	I
T	O	E	S	D	K	R	A	K	E	N
A	H	O	Y	R	A	P	H	I	B	E
R	I	B	A	L	P	L	A	T	E	R
O	T	L	R	A	M	E	W	E	A	K
H	U	R	D	L	E	A	K	A	N	D

Circle on group of letters which make a word. The word can be found going forward, up and down or diagonally.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING AZTEC PRINTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Discarded grocery sacks
Fluorescent tempera paint
Black, white paint
Soaking tubs, sinks, etc.

B. Procedures for this activity (with helpful hints)

To people in a predominately Indian-American community these designs had a very special meaning. Motifs were researched from Indian bark paintings and put on "recycled" paper bags.

1. To obtain a color and texture similar to real bark, bags were soaked in water, wrung dry, then brushed with black watercolor.
2. While still wet, diluted white tempera was brushed over the black.
3. Designs were painted with fluorescent tempera, then outlined with black markers. Where ethnic backgrounds are too mixed to suggest an art project, relate paintings to community industries or important events.

NAME ______________________________

Exploring the New World and Exploring our Country

Here is a short story about Christopher Columbus. Circle the word in each parenthesis which makes the story correct.

When Christopher Columbus was a boy, he lived in the city of (Genoa, Venice, Rome), Italy. Columbus liked to go to the harbor and watch ships unload silks, spices, and jewels which had come all the way from China and (Africa, the Indies, North America). They had come partly by land and partly by sea. This trip was long and dangerous.

Columbus spent many hours thinking about a cheaper and easier way to get to India, China, and the Spice Islands. When he was a young man, he went to Lisbon, (Portugal, France, Spain). There his brother Bartholomew sold (maps, groceries, boats) needed by sailors. Columbus studied many maps. We think that he even got to see a globe.

When Columbus lived, many people thought the world was (round, square, flat). Columbus thought it was round. "If it is round," said he, "I can reach the Indies by sailing (north, west, east)." He decided to try. The king of (Italy, France, Portugal) would not help him, so he went to Spain. Queen Isabella of Spain finally agreed to let him have (three, five, seven) ships and necessary equipment.

One morning at sunrise, Columbus said farewell to his son and climbed aboard the ship (Santa Maria, Nina, Pinta). Columbus then sailed west across the (Indian, Atlantic, Pacific) Ocean and landed on the island of San Salvador on October 12, (1492, 1519, 1607). He had not reached the Indies, but he had discovered (China, Africa, America). The people he found there he called (Africans, Americans, Indians). Columbus made three more trips to find India, China, and the Spice Islands, but failed. We honor him, however, because he discovered the New World.

Match the following names with what they did. Write the numbers on the blank spaces to the right.

1. Magellan
2. Cabot
3. Columbus
4. De Soto
5. Cartier
6. Marquette
7. Leif Ericson

1. I discovered America for Spain in 1492. ________

2. I discovered the Mississippi River. An old time automobile was named after me. ________

3. I was the leader of the first expedition to sail around the world. ________

4. I explored parts of Canada for France. The first letter of my name is the same as that of the discoverer of America. ________

5. I was a Norseman who came to America before Columbus did. ________

6. I was the French priest who explored North America with the fur trader, Joliet. ________

7. I explored parts of North America for England. My first name is John. ________

1. Hudson
2. Amerigo Vespucci
3. Vasco da Gama
4. Ponce de Leon
5. Coronado
6. Champlain
7. de La Salle

1. I discovered Florida for Spain. Notice that my name has three parts. ________

2. I explored parts of North America for the Dutch. An old time automobile was named after me. ________

3. I claimed the land drained by the Mississippi River for France. ________

4. America was named after me. Look at the first part of my name and notice the likeness. ________

5. I explored the Southwest for Spain. If you would change two letters in my name it would be Colorado. ________

6. I am a Portuguese sea captain who reached India by sailing around Africa. ________

7. I established a permanent French colony at Quebec. If you would look at a map of New York State, you would find a lake that was named after me. ________

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: GOVERNMENT: ELECTIONS '72

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The unit is developed as a means to acquaint students with the present form of our political system. This culminated with class elections and a play.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Filmstrip:
The Election of a President 1972 from the Daily Tribune
The Social Sciences

2. Field Trips:

Visit to Republican and Democratic Headquarters
8 Students to Tribune
Visit precinct on day of election
Visit the news room of the Daily Tribune when a national candidate was in the area
Visit student Court Room at Starr School
Visit Municipal Court

3. Human Resources:

Headquarters' workers
Sister of Congressman
Precinct chair person
Judge, court employees
Mayor representative in Congress
Parents - in communication and allied industries

4. Activities:

Nomination petitioning
Elections

UNIT TITLE: GOVERNMENT: ELECTIONS '72

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
U.S. Political System in elections including:	
Nomination of candidate	Nominate classmates Campaign for their candidate
Majority rule	Count ballots to reach a majority
Plurality	Score 70% or more on a teacher-made test dealing with the presidency (60% of class will succeed in this)
Platform	Participate in the production of a play about the United States government
Political parties	
Government a) resolving conflicts peacefully b) social controls c) representative and direct democracy d) leadership and authority e) interest groups	Locate information in a newspaper about a candidate running for political office or one serving in government and shall place this information in a scrap book Resolve conflict peacefully by using social controls Participate in representative and direct democracy through class election

METHOD OF IMPLEMENTATION

The viewing of 35 mm slides in the life of a U.S. Congressman including
- His campaigning
- His work at the Capitol
- His encounters with the Executive branch
- The National Democratic Convention

The process of American Government

Each student chose a person in government or a candidate in the newspapers and made a scrapbook of their work during September and October (5 weeks)

RESOURCE PEOPLE & MATERIALS

Mrs. Sally Tanner
(She was employed as a LET substitute in the fall of 1972)

Use of texts at the 3rd, 4th and 5th level in Social Science (See sample worksheet developed for the 3rd grade text)

The Election of a President 1972 from Daily Tribune (work sheet included)

Student supplied copies of the Daily Tribune, Detroit News, Detroit Free Press

UNIT TITLE: GOVERNMENT: ELECTIONS '72

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Creative writing	Write a skit about a career of their own interest giving the characteristics of the job
Role playing	Role play this skit to the class Role play a career he has studied
Interviews	Participate in interviewing the resource career people in class, on field trips, and others they come in contact with
Reporting	Have the opportunity to write a report and present orally to the class the observations viewed from field trips
Letter writing	Write thank-you letters
Develop vocabulary	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Introduced unit by discussing concepts: Why people work, etc. as related to government jobs Students interviewed their parents and other people about their careers - asking questions from concepts	
Democratic process was demonstrated by: a) electing 3 students by direct vote to select a game for gym b) the 3 students then chose the game the total class would participate in presenting an example of representative democracy c) class discussion followed to show advantages and disadvantages of both	Municipal Judge
Election of class leaders and class authority president and vice-president 2 judges Sheriff 4 representatives	
Duties of each office a) president - leader to guide and direct the class in setting up rules for class behavior b) vice-president assists the president in his leadership c) judges 1. appoint a clerk for court room procedures 2. preside over court held every two weeks 3. interpret the law and hand down decision on cases brought before them d) sheriff - enforces the decision of the judges e) representatives - voice of the class to the president and vice president (they are the electoral body) They appoint the poll clerks	
Any member of the class can file a complaint to be heard in court. They could represent themselves or have an attorney represent them	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Language Arts (continued) Implementation of Election: a) those students interested in running for elective office had petition signed by class members (10 names) b) validating petitions c) ballots, election polls, counting and validating the election official results	

UNIT TITLE: GOVERNMENT: ELECTIONS '72

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math	
Counting sequences Inequalities Sums Estimation	Tabulating voting
Career Awareness	
Managing a life style for people	Shall be able to describe total democratic process of managing people in a government
Reasons people work	Describe humanities, social and economic values of work
Functions of work	Shall be able to identify 4 service occupations of government
Locations of work	Shall be able to identify the federal, state and local levels of government
Tools	Shall be able to list 4 tools used in government work
Characteristics	Shall be able to list 2 likes and 2 dislikes of government work

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

THE BIG-LITTLE QUESTIONS

An important tool for the clear thinker is the fact. Facts are statements which a reasonable person accepts as true. Usually facts can be proved. Once you have facts, you are in a better position to form opinions, make decisions, take action.

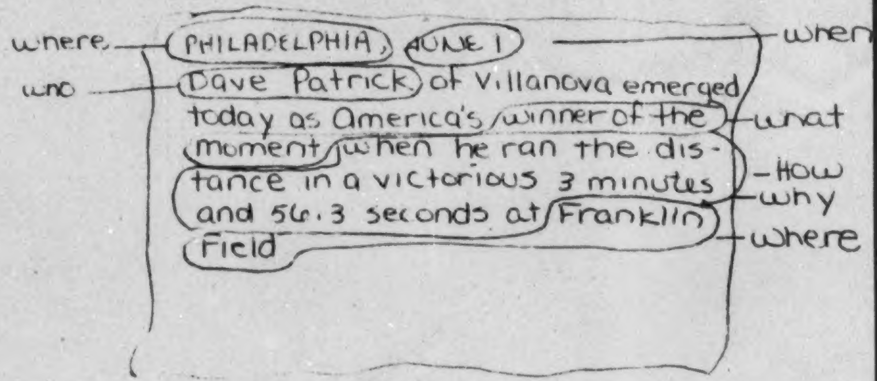
Facts aren't to be crammed into your head as a warehouse is stuffed with furniture. Facts are really the "raw material" or your thinking. They are not the end product. The important thing is to know how and where to find the facts!

How can you find the facts? Six little words unlock some big doors to facts and answers.

Try asking yourself these big-little questions:

They help to develop ideas, present problems, ask for opinions, dig for answers. By learning to ask and answer, a clear thinker can explore many possibilities and perhaps come up with new approaches to old problems, new ideas for old procedures, new information on old subjects.

How do the big-little questions work? Very often big-little questions are answered in the lead of a news article. In the paragraph following the lead, the reader learns more specific information - answers to questions behind the big ones.



PHILADELPHIA, JUNE 1

Dave Patrick of Villanova emerged today as America's winner of the moment when he ran the distance in a victorious 3 minutes and 56.3 seconds at Franklin Field

Once the big-little questions are answered, some further questions that might be raised are: Who else was in the race? What were their finishing times? How many people saw the race? Did Dave Patrick break any records? What was his reaction to winning? What was the significance of the race? These questions and many others might be answered in the rest of the article. In this way, the reader gets the main facts first and many others next.

Read this lead to find the main facts, and write in answers to the big-little questions.

June 14 - An American expedition has found what it believes to be the remains of Christopher Columbus's flagship, the Santa Maria. The wreck of the famed vessel was found off the coast of Hispaniola, a large island in the Caribbean Sea. Columbus's own log and documents of the period helped the archaeologists pinpoint the location.

WHO?_______________ WHEN?_______________

WHAT?_______________ WHY?_______________

WHERE?_______________ HOW?_______________

(Student's Name)		
		Frank Kelley
		Mayor Gribbs
		Ray Hayward
		Kissinger
		Ralph Nader
		Judge Roth
		Robert Griffin
		Robert Huber
		Gov. Wallace
		Spiro Agnew
		Gov. Romney
		Judge Thorburn
		Sen. Phillip Hart
		George McGovern
		O'Brien
		Israel
		Wm. Broomfield
		Shirley Chisholm
		Hazen
		Mrs. Barbara Hallman and Royal Oak Beautification - Recycling Center
		Patterson
		Kleindienst
		Sen. Muskie
		Gov. Millikin
		U.S. Rep. candidate Cooper
		Ted Kennedy
		Ron Cunningham
		H. H. Humphrey
		V. P. candidate S. Shriver
		Pres. Nixon

THE ELECTION OF A PRESIDENT

NAME____________________

This is a special year because we are ____________ a president for four years. Each national political ____________ selects a ____________ for president and ____________. The two main parties are the ____________ and the ____________.

The party begins in cities with workers and delegates at the ____________ level. These ward or precinct workers meet to choose people to go to the national ____________ conventions. To be a candidate for president you must be a citizen of the United States and be at least ____________ years old.

Some states held elections last spring called presidential ____________ At the nominating convention the part writes a paper about what it believes called the ____________. Nominating and ____________ speeches are given for each person running for the offices. Then small groups talk, win favor for their person; the group meetings are called caucuses. The person who receives a ____________ of the votes is chosen as that party's presidential candidate.

Next the ____________ who will be his ____________ mate is picked. Now the ____________ begins. These leaders work to win all their party members' help - that is they try to ____________ their party behind this candidate.

The way a candidate makes people feel about him is called his ____________ image. Each party tries to sell its nominee almost the same way TV tries to sell toys or cereal to you.

Next the parties work to get all possible voters ____________ so they will be allowed to vote. In November, the place where people vote is called a ____________. The voter votes by secret ____________. This is usually done on a machine. We usually have two polling places at Washington School

THE ELECTION OF A PRESIDENT (continued)

The majority winner in a state receives all of the state's votes to the electoral ____________________. This group meets after election day and ____________________ the states' votes. This is reported to ____________.

The newly elected president takes the ______________ of ____________________ on Inauguration Day in Washington D.C. This occurs in January. He will serve for ____________________ years. A person may not serve more than ____________ terms as President.

Word and Phrase List

campaigning
candidate
Democrats
ballot
college
leadership
running

casts
Congress
oath
poll
unify
office
vice-president

4
majority
2
registered
president
nominating

vice-president
Republican
primaries
35
platform
seconding

Use each one once.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: GOVERNMENT: EVOLUTION OF THE AMERICAN FLAG

GRADE LEVEL: 3-4

GENERAL OVERVIEW: This unit should familiarize the student with the development of our country and our flag. It's meant to develop love and respect for our country and its flag.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: Social Sciences - Values and Concepts, Harcourt Brace & World
Level 3 - p. 255
Level 4 - pp. 264-266
National Geographics - check "Index to Periodical Literature"

Films: History of Our Flag (Color, 9 min) I
Our Country's Flag (11 min B/W)

Filmstrips:
America the Beautiful
Capitol: Symbol of Our Nation
How Our Flag is Made (R)
Shrines and Monuments (R)
Statue of Liberty
Symbols of America
Visiting the Statue of Liberty
Your Flag

Realia: This is My Country Records
Pledge of Allegiance
Flags of America

2. Field Trips:

Detroit Historical Museum
Fort Wayne Military Museum

3. Human Resources:

Teachers

4. Activities:

Drawing flags
Sewing flags
Role-playing, Betsy Ross play about flag
Make diorama of periods in our history and display the flags
Collect and make a book of early history as it pertains to different flags

UNIT TITLE: GOVERNMENT: EVOLUTION OF THE AMERICAN FLAG

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
Flags Patriotism	Gather pictures, books and stories of changes in flags as our country has developed

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

Show the whole group movies and filmstrips
Display pictures from local and Royal Oak
Instructional Materials Center
In small groups view filmstrips frames
of particular flags
Read sections in level 3 and 4 texts
Write stories about various flags
after research, e.g.

- Leif Ericson - Viking flag
- Columbus - his flag
- England - Union Jack
- Early American Flags
    - Endicott flag
    - New England flag
    - Washington's flag
    - Continental flag
    - Bunker Hill flag
    - Bennington flag
    - Betsy Ross flag
    - Confederate flag
    - Stars and Stripes
        - 48 star
        - 50 star
    - Michigan flag
    - Royal Oak/Huntington Woods flag

Perform Betsy Ross play
Write creative plays or poems about some
phases of flag development
Make cloth flags
Make dioramas
Take field trips

UNIT TITLE: GOVERNMENT: EVOLUTION OF THE AMERICAN FLAG (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Research history	Analyze how different people and countries affected the country and the flag
Report writing	Compare the likenesses and differences in appearance of the flags
	Relate the uses and meanings of "Old Glory"
Music and Art	
Patriotic songs	Learn the 3 verses of "The Star Spangled Banner" Learn "America the Beautiful" words and melodies Write the "Pledge of Allegiance" words from memory Prepare two flags from paper and one from cloth

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

UNIT TITLE: GOVERNMENT: EVOLUTION OF THE AMERICAN FLAG (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Careers	
Producing	Make a book of stories and flags Silk screen flags of our country
Products	Construct dioramas appropriately representing geographical sections of our country

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING BOOKS ON EVOLUTION OF FLAG

II. ACTIVITY FORMAT:

A. Tools and Materials

Paper	Paste
Cardboard	Needle
Thread	

B. Procedures for this activity (with helpful hints)

1. Make a book (Binding Method).
2. Write stories from research - from early discovery of America to present time.
3. Research and draw flags that go with these early stories (See list of people and flags listed on page 1).
4. Copy poems and songs about flag.
5. Write history of Pledge of Allegiance to the Flag.
6. Put all of above into the made book.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKE A DIORAMA OF PHASE OF MICHIGAN'S GROWTH (Use dioramas on Detroit Historical Museum by a guide)

II. ACTIVITY FORMAT:

A. Tools and Materials

Box
Cloth
Paper
Small dolls

B. Human Aides and Resources

Research
Detroit Historical Museum
Fort Wayne Military Museum

C. Procedures for this activity (with helpful hints)

1. Identify one phase of historical growth such as Cadillac establishing Detroit.
2. Make clothing, boats, etc. of that period.
3. Paste some in box making diorama.
4. Display the flag of that particular period.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: GOVERNMENT: LEVELS OF GOVERNMENT

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The levels of government were explored. The relationship of government to the free enterprise system was stressed.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: The Social Sciences - Level 3 - Unit 7 (Harcourt Brace & World)
The Social Sciences - Level 4 - Units 5 and 6, pp. 184-291

Maps: School District, Huntington Woods, Royal Oak, Oakland County, Metropolitan area, State

2. Field Trips: (within and out of school)

Royal Oak Public Schools - 1026 N. Main Street
4000 Crooks Road
Huntington Woods City Hall - Treasurer
Royal Oak City Hall - Treasurer, Planning
Oakland County Court House - Treasurer
Huron Clinton Metropolitan Authority
Michigan Employment Security Office - Detroit

3. Human Resources:

Mothers to drive and supervise each small group.

4. Activities:

Make a large map of each level.

UNIT TITLE: **GOVERNMENT: LEVELS OF GOVERNMENT**

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Reading for information	Construct an exhibit of one level of government for the school
Letter writing	Prepare a scale map of their political level of government
Oral communication	Construct a display appropriate to their areas of study
Written reports	
Creative writing	

METHOD OF IMPLEMENTATION

Unit 4 of the fourth grade Social Science Book was used as a starting point for the unit.

Scale map of area chosen, with help of opaque projector.

Research to get background for questions.

Brainstormed for questions to ask resource people.

Sent business letter and questionnaire to resource person to be visited as preparation for their visit - giving background of the areas studied.

Mini field trip (with 4-5 in a group).

Compiling information from the field trip and research in preparation for exhibit to be shared within the school.

Thank-you letters.

Interchange among the various groups for comparison of services the different departments provided.

Exhibit for the school.

Student evaluation of the experiences.

RESOURCE PEOPLE & MATERIALS

Field trip:

Royal Oak Public Schools
1026 N. Main
Mr. Potthoff,
Personnel - other than teachers
Mr. Goodall,
The budget
4000 Crooks Road
Mr. Welch,
Teaching personnel

Field trip:

Huntington Wood City Hall
LI 1-4300
Mrs. Barbara Smela,
Treasurer

Field Trip:

Royal Oak City Hall
LI 6-1000
Civil Defense,
Mrs. Rogers
Planning - treasurer,
Mr. Tubbs

Field Trip:

Oakland County Court House
Pontiac
1-645-1150
Treasurer
Mr. Shayne Murphy

UNIT TITLE: GOVERNMENT: LEVELS OF GOVERNMENT (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Mathematics	
Budget parts	Identify three sources of tax revenue
	Identify four uses of tax revenue
	List priorities in developing a budget
Careers	
Man and his job role	Identify various levels of occupations in their chosen department
Managing government	Identify the qualifications for three jobs in the department - identify four types of training needed
Servicing a community	Identify whether the job produces a product or renders a service
Personnel employed in public service	Identify different incomes of workers in the department

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
	Field Trip: Huron Clinton Metropolitan Park Authority 600 Woodward, Detroit Mr. Downey 961-5865 ----- Field Trip: Michigan Employment Security Office 7310 Woodward at Grand Blvd. Detroit 872-4900, ext. 430 Tour leader - Edison Vogel Room 515 also Mr. Don McGee Mr. Friedman Governor has an office for his use here.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

VISIT TO HUNTINGTON WOODS CITY HALL

II. ACTIVITY FORMAT:

A. Human Resources:

Treasurer of City Hall
Parents

B. Procedures for this activity:

Interview (questions to seek answers for):

TAXES

Where do you get your money from? What kind of taxes are collected and who pays them?

How much from property taxes?

How much from sales tax?

How much from gasoline tax?

Who collects the taxes?

BUDGET

How much money is in your budget? Do you have it broken down by departments?

What are the departments?

How many people are on the police force? The fire force?

How many employees altogether do you have?

What is the average salary?

What kind of activities (services) do you have?

ZONING

Does Huntington Woods have zoning rules? How is it zoned?

Who runs the city? How is (are) he chosen?

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

GROUP VISIT TO ROYAL OAK CITY HALL

II. ACTIVITY FORMAT:

A. Human Resources:

Civil Defense Tour Leader
Drivers

B. Procedures for this activity:

Interview (questions to seek answers for):

TAXES

Where do you get your money from?

How much money does it take to run Royal Oak?

How many people live in Royal Oak?

What different kinds of taxes does Royal Oak receive money from?

Who collects each kind?

BUDGET

How is the money spent?

How is the money budgeted?

How many departments do you have?

How many employees do you have? What is their average salary?

Do you help run the schools?

JOBS

What kinds of training does Royal Oak need in the people they hire?

What are the requirements to work in Royal Oak?

ZONING

Do you have zoning? How is the city zoned? Who decided on zones?

Is there room for more houses and factories and stores in Royal Oak?

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

VISIT TO OAKLAND COUNTY TREASURER'S OFFICE

II. ACTIVITY FORMAT:

A. Human Aides and Resources:

Oakland County Treasurer
Parents

B. Procedures for this activity:

Interview (questions to seek answers for):

TAXES

What kind of taxes does the county get? Who collects it?

Who pays them? Gasoline taxes - how much?
Property taxes - how much?

State money for Intermediate schools?

Other monies? How much?

How much money does it get each year to spend?

BUDGET

How much money does it spend?

How many and what departments does it have?

How many people work for the county?

- In the sheriff's department?
- In the welfare?
- In the courts?
- In the roads?
- In the Health departments?
- At the county offices?
- At the school?
- Other areas?

How many people live in the county?

ZONING

Is there any town planning or county planning for areas of high population and areas of recreation?

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HURON-CLINTON METROPOLITAN AUTHORITY - DETROIT HEADQUARTERS

II. ACTIVITY FORMAT:

A. Human Resources:

Director of Huron-Clinton Metropolitan Authority
Students
Parents

B. Procedures for this activity:

Interview (questions to seek answers for):

TAXES

Where does your tax money come from?

How much do you get for your taxes?

Do you have enough money? Did you request more?

BUDGET

How do you use your money? How many parks are there in your authority?

Do you have different departments? How much money does each have to use? If there aren't departments, how is your money divided?

WORKERS

How many workers do you have? What kind of education do they have? If I want a job with you what kinds of things do I have to do or be able to do? How much money do your workers earn?

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: HOLIDAYS AND CUSTOMS - CHRISTMAS

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The children, all new to L.E.T., and most of them uninitiated in the use and care of basic tools, need to have practical experience in using tools that would give them a finished product that they would be proud to take home at their first attempt.

This unit evolved from social studies, science, language arts, music and art. Students were enthusiastic about the holiday season activities. This was integrated with a study of the occupations involved.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: McCall's Book of Paper, Wood, Paint Crafts

Films: Film and Booklets - A.B.C.'s of Tools
General Motors Corporation

2. Field Trips:

Lumber yard
Fabric shop
Department store
S.E.O.V.E.C.

3. Human Resources:

Parents
Student helpers
College students

4. Activities:

Holiday cookie making
Holiday dinner
Construction of keyboards
Make a tie
Make an apron
Do creative stitchery
Make a picture frame
Design a picture
Wooden Christmas tree ornaments
Plaster of Paris pins
Holiday pencils
Yarn dolls
Felt Christmas tree ornaments
Egg carton wastebaskets
Styrofoam tree ornaments
Role play - workers producing a product on a custom basis and compare this to quantity production of the same product

UNIT TITLE: HOLIDAY AND CUSTOMS - CHRISTMAS

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Composition	Apply the rules of letter writing Describe projects completed
Proofreading	Prepare written invitations
Letter writing	Send thank-you notes
Science	
Simple machine	Demonstrate ability to use tools as evidenced by completed woodworking project
Knowledge of basic food groups	Recall the basic food groups
Planning a well-balanced meal	Define a balanced meal Prepare a meal

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Christmas card	
Group discussion of safety precautions Using tools Holiday dinner	

UNIT TITLE: HOLIDAYS AND CUSTOMS - CHRISTMAS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Mathematics	
Measuring	Measure raw materials to be used in production
Research costs of supplies	Compute cost
Purchase materials	
Art	
Arts and crafts	Construct crafts of different materials
Social Studies	
Customs of the holiday season	Discuss the meaning of the holiday season. Read and find out more about customs and traditions associated with Christmas and Hanukkah
History of tools, archaeology, man's adaptation to his environment	Illustrate a simple chart of early man's tools or describe them in several brief paragraphs
Raw materials - where did the material come from?	
Economics - cost of items	
Human Relations - working with people	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Production of Holiday crafts	
Discussion and research Research and illustration Research	

UNIT TITLE: HOLIDAYS AND CUSTOMS - CHRISTMAS (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Music Holiday songs	Recall many of the holiday songs and Christmas carols
Career Concepts Managing Producing	Produce a product and manage the production system

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Christmas carols	
Managing/planning - logical steps from raw material to complete project Producing - pride in hand crafted product vs. mass produced product	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CHRISTMAS DECORATION USING TAG PAPER, FOIL AND STYROFOAM

II. ACTIVITY FORMAT:

A. Tools and Materials

Needle
Scissors
Styrofoam cutter
Tag paper
Green foil
Styrofoam
Thread

B. Procedures for this activity (with helpful hints)

1. Fold foil to cover tag paper
2. Make covered paper into circle
3. Staple paper into circle
4. Make one pattern of tree, angel, star, candy cane, etc.
5. Cut figure from styrofoam
6. Thread needle
7. Put thread through styrofoam figure and then through foil ring
8. Leave loop of thread to use as tie on tree
9. The styrofoam figure should hang free inside the ring

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTION OF KEYBOARDS (OR MITTEN TREES) (see attached)

II. ACTIVITY FORMAT:

A. Tools and Materials:

- Wood stain
- Clip clothespins
- Cup hooks
- White glue
- Wood putty
- Turpentine
- Soft rags
- Dowel rod
- Black spray paint
- Sheet of 4' x 8' plywood
- Miter box and saw
- Brace and bit
- Hammers
- Nails
- 9 paint brushes
- Cardboard box for "spray paint booth"
- Find and medium sandpaper
- Colored enamel

B. Human Aides and Resources:

College students

C. Procedures for this activity:

Have plywood pre-cut to 8" x 10" size.
Use a miter box to cut pegs to correct length.
Apply stain with wide brush and wipe off with soft cloth.
Have plenty of turpentine!

2 brushes

PEG KEY BOARDS

Boards

Place block underneath
Drill hole completely through board in five places

Pegs

(Use five pieces)
Measure 2" for each peg.
Cut carefully where you have marked.
Dip pegs in stain (end you are holding onto will be glued in hole so does not have to be stained)

Glue pegs into holes with white glue.
Fill area around hole with wood putty.
Wipe all sawdust from board.
Stain board with wood stain.

---

6 brushes

PIANO KEY BOARDS

Boards

Wipe sawdust from board.
Discuss proper painting technique with enamel.
Spread out newspaper.
Paint board white.
Clean brushes!

Clothespin Keys

Tie seven pins to strings.
Hang inside carton
Discuss techniques for spray painting.
Spray pins black

Assembling

Mark location for keys (measured real keyboard)
Take clothespins apart
Drill hole in one-half of pin
Nail through hole into board
Re-assemble clothespin

---

1 brush

CUPHOOK KEY BOARDS

7 cup hooks
Other materials same as Piano Key Board

Wipe sawdust from board.
Discuss painting technique with enamel.
Spread out newspaper.
Paint board a light color.
Paint design with small brushes and colored enamel.
Screw in cuphooks.

200

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TIE MAKING

II. ACTIVITY FORMAT:

A. Tools and Materials:

Tie making kit with all materials in it
Sewing machines
Irons
Ironing boards

B. Human Resources

Parents

C. Procedures for this activity

Follow the instructions that are included in the tie kit. These kits are available at most fabric stores.

Iron the finished product. Fold and wrap.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING AN APRON

II. ACTIVITY FORMAT:

A. Tools and Materials

1 yard of cloth	Sewing machine
Needles	Thread
Iron	Ironing board

B. Human Resources

Parents

C. Procedures for this activity

1. Cut large pattern out of newspaper.
2. Have children pin pattern on cloth and cut it out
3. Use machine to turn under hem and to add tie at the top
4. Add pockets if desired
5. Iron the apron
6. Fold and wrap

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CREATIVE STITCHERY

II. ACTIVITY FORMAT:

A. Tools and Materials

Burlap
Yarn
Needles

B. Human Resources

Parents

C. Procedures for this activity

1. With help of art teacher, children designed a picture on paper.
2. They cut out their picture and traced it with pencil on burlap.
3. Embroider with various stitches around picture. Use different colored yarns.
   *Mothers taught special stitches to the children: French knot, running stitch, chain stitch, etc.
4. Hem edges on machine.
5. Cut dowels of wood and insert at top to hang up.
6. Add braided yarn tie at top.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PICTURE FRAMES AND PICTURES

II. ACTIVITY FORMAT:

A. Tools and Materials

Wood
Glue
Miter box
Scissors
Furniture stain
Poster board
Saws
Rulers

B. Human Resources

Parents
College students

C. Procedures for this activity

1. Measure amount of wood for a frame (perimeter)
2. Cut wood into desired lengths
3. Miter the corners
4. Cut poster board to desired length and width
5. Stain the wood
6. Glue wood onto poster board
7. Cut pieces of felt to form the picture
8. Glue felt

NAME______________________________Date____________PROJECT LET ACTIVITY

1. Write the name of the students in your group ______________________________

____

2. Write the names of the adults that helped you______________________________

____

3. The distance around a rectangle, square, or triangle is called its perimeter.

Show 2 different ways to find the perimeter of your picture frame.

(1)	(2)

4. How long is the piece of wood you need for your picture frame?________________

5. How long is the piece of wood that was purchased?__________________________

6. How many picture frames can we cut from this piece of wood?__________________

7. List the materials you used for this project______________________________

____

8. What tools did you use for this project?__________________________________

____

9. What tool is used to cut the corners for the picture frame?__________________

10. What kind of saw is used with a miter box?_______________________________

11. What time did you start this activity?__________________________________

12. What time did you stop working on this activity?__________________________

13. How much time did you spend on this activity?____________________________

14. If you were doing this activity (making picture frames) on an assembly line, what kind of jobs would there be?

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HOLIDAY COOKIE MAKING

II. ACTIVITY FORMAT:

A. Materials

2 1/2 cups sifted flour
1/4 teaspoon baking powder
1/2 teaspoon salt
1 cup shortening
2 teaspoon vanilla
1/2 cup sifted sugar
3 or 4 tablespoons milk

B. Human Resources

Parents

C. Procedures for this activity (with helpful hints)

Divide students into four groups - each group makes a recipe of cookies.

Procedure

Sift dry ingredients. Mix shortening, vanilla, and sugar until creamy. Add dry ingredients and milk alternately. Refrigerate at least two hours. Roll out 1/4 inch thick. Bake on ungreased sheets for 15 minutes at 350 degrees.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HOLIDAY DINNER MENU

II. ACTIVITY FORMAT:

A. Tools and Materials

Hot plate
Disposable tableware
Oven roaster
Cooking tools
Ingredients

B. Human Aides and Resources

Parents

C. Procedures for this activity (with helpful hints)

Divide class into four groups. Each group prepared two or more items for the dinner.

Turkey
Dressing
Cranberry Sauce
Baked potatoes
Corn
Bisuits
Butter
Milk
Cookies
Jello

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

WOODEN CHRISTMAS TREE ORNAMENTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Saw
String
Paint and brush
Drill
Horse
Clamp

B. Human Resources

Parents

C. Procedures for this activity

1. Student drew picture of ornament on wood. It is helpful to first have a pattern to trace or look at.
2. The design was then cut out - using a saw.
3. Next the ornament was painted on both sides. Some used paint and others used magic markers of different colors.
4. Last of all the ornaments were shellaced.
5. Then a string was put through hole in top so the ornament could be hung on the tree.
6. After drying, these were wrapped for Christmas gifts to be given to the parents.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PLASTER OF PARIS PINS

II. ACTIVITY FORMAT:

A. Tools and Materials

Plaster of Paris
Plastic spoon
Small safety pin

B. Procedures for this activity (with helpful hints)

1. Mix by using twice the amount of water as plaster of Paris.
2. Each child dips a spoonful of this.
3. This must set for a few minutes until thick and then the pin is inserted, with open side up.
4. As soon as this is completely dry, the pin easily comes out of the spoon.
5. It is then painted or magic marker may be used.
6. After this dries it may be shellaced.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HOLIDAY PENCILS

II. ACTIVITY FORMAT:

A. Tools and Materials

Pencils
Pipe cleaners
Colored tape
Small Santa or angel decoration

B. Procedures for this activity (with helpful hints)

1. Attach small decoration to pencil with a piece of pipe cleaner.
2. Roll colored tape on pencil beginning at top, to hold ornament on.
3. Roll tape down pencil to an inch or so from bottom.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

YARN DOLLS

II. ACTIVITY FORMAT:

A. Tools and Materials

Yarn
Cardboard
Felt
Scissors

B. Procedures for this activity (with helpful hints)

1. Roll yarn over ends of small piece of cardboard. May use desired thickness.
2. Tie a small piece of yarn around the top for the head and then in the middle for the body.
3. Cut some of the strands and pull out for the arms and also for the legs.
4. Small pieces of felt are cut out and used for facial features.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

FELT CHRISTMAS TREE ORNAMENTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Felt
Sequins
Glue
String

Pencil
Scissors
Christmas card pattern

B. Procedures for this activity (with helpful hints)

1. Choose color and size of felt needed.
2. Draw design on piece of felt and cut it out.
3. Glue on designs of sequins, felt, etc.
4. Attach a string for hanging on tree.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

EGG CARTON WASTE BASKET

II. ACTIVITY FORMAT:

A. Tools and Materials

8 styrofoam egg cartons (for each waste basket)
yarn
cardboard
large pie tin
paper punch

B. Procedures for this activity (with helpful hints)

1. Cut top off egg cartons and use only bottom half.
2. Put together with yarn, one piece of yarn is tied at top and one at the bottom.
3. A pie tin or round piece of cardboard is used for the bottom of the basket.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

STYROFOAM TREE ORNAMENTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Styrofoam balls
Pins
Gold string
Beads
Lace or ribbon
Stars
Sequins

B. Procedures for this activity (with helpful hints)

1. Decorate white styrofoam balls with an assortment of stars, sequins, beads, lace or ribbon.
2. Put them on with small straight pins
3. Put a string on so it can be hung on tree.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: HOLIDAYS - THANKSGIVING

GRADE LEVEL: 3-4

GENERAL OVERVIEW: A study of colonial times, particularly concerning the preparation of food and the Pilgrim-Indian relationship. Development of an appreciation of work, then and now.

TEACHING/LEARNING RESOURCES:

1. **Reference Materials**

Books: Story of the Navajos
The Pilgrims Knew
The Thanksgiving Story
Pelli's New Suit

Films: Colonial Children

Filmstrips:
Cooking in Colonial Days
(on Indians) from Lincoln M.C.

Realia: Toaster
Butter Churn
Candle Molds
Flat Iron
Record - Indian Dances

2. **Field Trips:**

Farmer's Market to buy pumpkins for pie

3. **Human Resources:**

Parents

4. **Activities:**

Role playing experiences:

Indians Dancing
Thanksgiving Dinner

1. Making costumes (Indians, Pilgrims)
2. Making butter
3. Making pumpkin pies
4. Thanksgiving dinner and Indian dance
5. Candle dipping
6. Making corn bread
7. Making applesauce

UNIT TITLE: HOLIDAYS - THANKSGIVING

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Dictation	Dictate ideas for a group or individual story
Reading	Read back charts, stories that have been dictated in whole or part, in a group or individually
Oral Communication and listening	Listen to others' ideas in planning while working together during dinner, etc. Contribute to a sequence picture story
Mathematics	
Dry and liquid measurements	Discuss measuring as pertains to recipes
Counting	Count steps in a dance
Social Studies	
Colonial life Indian life	Draw or tell about some aspects of Indian and colonial life
Working together	Work effectively with a group planning and carrying out an activity

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Making applesauce	
Making candles	
Paper weaving - place mats	
Making a mural of the story	
Making a mural of roles of Indians	
Making a mural of roles of Pilgrims	
Making a mural of tools used then - now	
Role playing about Indian customs	
Role playing about Pilgrims	

UNIT TITLE: HOLIDAYS - THANKSGIVING (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science Changing forms of matter Machines Historical tools	Discuss the machines used in a given activity - its source of power, etc. Report how matter is changing to another form while cooking
Art Weaving Composition Costumes	Cut and paste Use patterns to make a costume Dip candles Weave with paper strips
Career Concepts People and their job roles Production and consumption Management and planning	Work together on a project Tell jobs important to the Pilgrims Describe what the Pilgrims and Indians learned from one another Compare orally tools used then and now for similar jobs Plan a Thanksgiving meal

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Holidays - Thanksgiving	
Making Indian costumes	
Making Pilgrim costumes	
Learning and performing Indian dances	
Planning the dinner - find recipes	
Preparing Thanksgiving dinner	
Making butter	
Making pumpkin pies	
Making corn bread	

NOVEMBER _____, 19___

DEAR PARENTS,

THE ____________________ GRADES ARE PLANNING A MINI-THANKSGIVING DINNER FOR ______________________________________. THE CHILDREN WILL BE GOING HOME FOR LUNCH AS USUAL. IF POSSIBLE, HAVE THEM WEAR DARK CLOTHING TO COMPLETE OUR HANDMADE INDIAN AND PILGRIM COSTUMES.

OUR MENU WILL CONSIST OF TURKEY, (the modern rolled variety!) APPLESAUCE, CORN BREAD, BUTTER, PUMPKIN PIE (ALL CLASSROOM PRODUCED), CORN AND CIDER.

IF YOU WISH YOUR CHILD TO PARTAKE OF OUR "FEAST," PLEASE SIGN AND RETURN THE PORTION BELOW. NO COST IS INVOLVED AS WE ARE BEING FUNDED BY PROJECT L.E.T (LEARNING EXPERIENCES IN TECHNOLOGY).

THANK YOU FOR YOUR COOPERATION.

____

______________ HAS PERMISSION TO TAKE PART IN THE DINNER.

____

PARENT"S NAME

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING COSTUMES

II. ACTIVITY FORMAT:

A. Tools and materials

Construction paper
Patterns
Scissors
Paste
Macaroni
Yarn
Beads

B. Procedures for this activity (with helpful hints)

Children used teacher made patterns to construct pilgrim costumes one afternoon and Indian costumes another day. Before the dinner they signed up to wear one or the other so we had some of each at the dinner. Pilgrim costumes consisted simply of hats, collars, and cuffs. Indians wore head dresses and hand painted macaroni and bead necklaces. Macaroni breaks easily but is so much fun it's worth it!

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING BUTTER

II. ACTIVITY FORMAT:

A. Tools and Materials

2 pints whipping cream
Baby food jars
Large bowl
Yellow food coloring
Salt
Spoon

B. Human Aides and Resources

Parents

C. Procedures for this activity (with helpful hints)

1. Fill jars 1/3 full with cream.
2. Shake 15-20 minutes - Until butter separates.
3. Collect all butter in a large bowl. Pour off remaining milk. Rinse several times with water. Pour off water.
4. Add salt to taste.
5. Add food coloring.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PUMPKIN PIE

II. ACTIVITY FORMAT:

A. Tools and Materials (See attached recipe)

B. Human Resources

Parents

C. Procedures for this activity

Divide the 20 children in three groups. One group making crust for four pies and the other two groups each making filling for two pies.

SPRY'S "NO-PATCH" PASTRY

(Double Crust)

2 1/4 cups sifted flour
1 teaspoon salt
3/4 cup plus 2 tablespoons Spry
1/3 cup cold water

Mix flour and salt in a bowl. Cut in 2/3 of Spry until fine as meal. Cut in remaining Spry to size of large peas. Sprinkle water, 1 tablespoon at a time, over mixture. Toss lightly with a fork. Lightly form dough into a smooth ball. Divide in half; form into 2 balls. Place dough on lightly floured board. Flatten slightly. Roll out from center to form circle 1/8 inch thick. Ease dough into pie pan; trim even with outer edge of pan. Roll out remaining dough; cut slits to allow steam to escape. Lay over filled pie shell. Trim; fold under bottom crust. Seal by fluting edge.

Recipe for Pumpkin Pie Filling

(2 10" pies enough for 1 class - we doubled this to serve 2 classes)

1 can pumpkin (large)
6 eggs, slightly beaten
2 cups light brown sugar
1 teaspoon salt
2 teaspoon cinnamon
1/2 teaspoon cloves
1/2 teaspoon nutmeg
1/2 teaspoon ginger
2 cups evaporated milk

Combine eggs, sugar, salt, and spices and beat well. Blend in pumpkin. Add milk and beat well. Turn into two pastry-lined pie pans. Bake at 450 degrees for 10 minutes, then at 350 degrees for 40 - 45 minutes Pies are done when knife, inserted in center, comes out clean.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

THANKSGIVING DINNER AND INDIAN DANCE - For 40 children - 2 classes

II. ACTIVITY FORMAT:

A. Tools and Materials

Paper plates
Napkins
Plastic forks and
Spoons
Cups
Placemats woven
from paper by
children

Menu

2 turkey rolls
corn (frozen)
applesauce
corn muffins and butter
cider
pumpkin pie

B. Human Resources

Five (5) mothers

C. Procedures for this activity

The two classes of children had signed up for set up or clean up and helped the mothers in crews of five while the teachers remained in our room with the other children putting on costumes, etc. The dinner took place in the gym. We did an Indian dance we had learned and said a short blessing before taking our places at the table. Children from the two classes sat across from one another for conversation concerning their respective recipes, compliments regarding such, etc.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CANDLE DIPPING

II. ACTIVITY FORMAT:

A. Tools and Materials

2 candle dipping vats
1 1/2 blocks of paraffin
Crayon bits (2 colors) for tinting
Wick

B. Human Resources

One mother

C. Procedures for this activity

Discuss the procedure beforehand.

1. Chop up the wax
2. Melt the wax in the two vats
3. Spread newspapers on and around two large tables
4. Dip the candles
5. Hang the candles to dry

One vat was placed on each of the two tables. Ten children surrounded each table, were given wicks, reviewed the procedure, designated the dipping point, and proceeded walking around table drying - dipping. An adult stationed at each table. Time of actual dipping approximately 1/2 hour.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: HUMAN BIOLOGY

GRADE LEVEL: 3-4

GENERAL OVERVIEW: In this Human Biology section, the following integrated teaching units have been combined and/or presented as a tentative guide for ideas in application to or relevance to the upper elementary classroom:

Conditioning and Response
Dental Health
Human Biology
Health
Medicine
Nutrition

Children express intense interest in their bodies, how they learn, their sequential development-physically and mentally, and their personal health. Food is also a favorite topic and is easily used as a basis to investigate nutrition. Since dental caries occur in 98% of the United States population, preventive dentistry is a needed area of study too.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
What Good Luck What Bad Luck
How Many Teeth
Going on Ten - Health Text 4th p. 26
About Yourself - Health Text 5th
Dairy Council Materials
Human Body - Life Series

Films:
Breathing
Ears: Their Structure and Care
Heart and Circulation
Heart, Lungs, Circulation
Human Body, The: Circulatory System
Human Body, The: Digestive System
Human Body, The: Excretory System
Human Body, The: Muscular System
Human Body, The: Nervous System
Human Body, The: Nutrition and Metabolism
Human Body, The: Reproductive System
Human Body, The: Respiratory System
Human Body, The: Skeleton

Films: (continued)

- Human Machine
- Infectious Diseases and Natural Body Defenses
- Muscles and Bones of the Body
- Story of Menstruation
- You and Your Ears
- You and Your Eyes
- You and Your Five Senses
- Cleanliness and Health
- Save Those Teeth
- Oakland Schools Film Library
  - 607 Boy to Man (16 min)
  - 456 Fertilization and Birth (10 min)
  - 606 Girl to Woman (16 min)
  - Narcotics and Dangerous Drugs I.D. Kit

Filmloops:

- Dental Office Assisting
- Dental Lab Technician
- Dental Hygienist
- Hearts and Plucks
- School Nurse, Principal
- Regular R.N.
- Dental Lab Technician
- License Practical Nurse
- Dental Assistance

Filmstrips:

- About Boys (R)
- About Girls (R)
- About Your Life and You (R)
- Billy Meets Tommy Tooth
- Breakfast and the Bright Life (R)
- Dental Health for the Grade School
- The Doctor Examines You
- Ears and Hearing
- Eyes and Seeing
- Feel of Your Skin
- Finding Out How You Grow
- Food for Good Health
- Food Makes the Difference
- Getting Acquainted with Our Bodies
- Growing Up
- Here's Your Ear
- How Bones and Muscles Work
- How Your Nose Knows
- Keeping Food From Spoiling
- Keeping Children Safe
- Look How You See
- Louis Pasteur
- Muscular System
- Nervous System
- Our Health Department
- Public Health

Filmstrips: (continued)

- Skeletal System
- Skimpy and a Good Breakfast
- Skin and Its Functions
- Sleep and Rest
- Taste, Smell and Touch
- Teeth and Eating
- To Smoke or Not To Smoke (R)
- Vitamins and You
- Weapons Against Disease
- We Grow
- What a Doctor Sees When He Looks at You
- What is A Cell?
- Why Eat a Good Breakfast
- Why We Breathe
- You and Your Ears
- You and Your Eyes
- You and Your Five Senses
- You, The Human Being
- You, The Living Machine
- Your Blood System, Heart
- Your Bones and Muscles
- Your Eyes at Work
- Your Food and Digestion
- Your Heart and Lungs
- Your Life Stream
- Your Muscles
- Your Nose and Throat
- Your Sense of Smell and Taste
- Your Sense of Touch
- Your Skin
- Your Skin and Its Care
- Your Tasting Tongue
- Your Teeth and Their Care

Flat Pictures:

- Bathe - Enjoy the Water
- Bicycle Safety Set (Disney)
- Drama of Life Before Birth
- Guide to Good Eating
- Health Helpers (Gunter)
- History of Medicine in Pictures I, II, III
- History of Pharmacy in Pictures
- Home Safety (Disney)
- Medical Helpers (Gunter)
- Parts of the Body (EBF)
- Pedestrian Safety Rules (Disney)
- Play for Health
- Play Out-of-Doors the Year 'Round
- Safety Helpers (Gunter)
- Sit Straight, Stand Tall
- Sleep for Health
- Sleep Long Hours
- World's Within Our Body

Realia: X-rays - Elbow and Forearm

- Foot
- Hand and Forearm
- Hands
- Head or Skull
- Intestine
- Leg and Rib Cage
- Pelvis
- Ribs
- Spine

Charts

- Animal and Plant Cells (Nystrom)
- Beginning The Human Story: A New Baby
- The Body (Health)
- The Brain (Health)
- Chick Embryos (Turtox)
- Circulation (Health)
- Digestion (Health)
- The Glands (Health)
- Human Ear (Turtox)
- Human Eye (Turtox)
- Muscles (Health)
- The Nerves (Health)
- Respiration (Health)
- Section of the Skin (Turtox)
- The Senses (Health)
- The Skeleton (Health)
- Typical Animal Cell
- Your Heart and How It Works

Transparencies

- Animal Cell Types
- Human Circulatory System
- Human Heart
- Human Skeleton and Muscles
- Human Skin in Cross Section
- Structure of a Tooth
- Structure of an Ear
- Structure of an Eye
- Typical Animal Cell

Models

- Blood Pressure Cuff
- Bones
- Brain
- Digestive System
- Ear
- Eye
- Gall Bladder
- Heart
- Heart, Lungs, Larynx
- Jaw
- Lung
- Otoscope
- Scalp
- Skeleton

Realia: Models (continued)
- Skin
- Skull
- Spirometer
- Stethoscope
- Teeth
- Tongue
- Torso
- Urinary Tract

2. Field Trips:

- Suburban Ambulance
- Beaumont Hospital
- SEOVEC - Dental Office Assisting
- Macomb County Community College - TV Studio - production of play
- Henry Ford Museum - Medicine
- Detroit Historical Museum - Medicine
- Oakland County Health Department
- Bakery
- Candy Factory
- Royal Oak Farmers Market

3. Human Resources:

- Dental Health
  - Dentist
  - Dental Hygienist
  - Dental Office Assistants (SEOVEC) (students)
  - Dental Laboratory Technician
- Medicine
  - Pharmacist
  - Public Health Nurse
  - Physician
  - Hospital Personnel
- Parent Drivers
- Conditioning
  - Animal trainer
  - School nurse
  - Psychologist
- Nutrition
  - Dietition - Beaumont
  - Oakland County Cooperative Extension Service
    - Family Living - Home Economics Dept.
    - 1026 N. Telegraph Road
    - Pontiac 1-334-3507
- Preventive Medicine
  - Health Insurance Agent
  - Life Insurance Company representative

4. Activities:

Dental
- Interview Dental Health Team
- Mouth Care - Each child with brush paste, coloring matter etc.
- Role play - prevention of teeth decay through proper diet
- Dissection - hearts and plucks of sheep
- Measure pulse rate at rest, at work, and return to rest rate
- Plan menus for good nutrition

Conditioning
- Construct wood on mazes
- Test stimuli - sour, sweet, bitter
- Collect examples of advertising - classify as to appeal

Humans
- Construct skeleton out of styrofoam
- Growth record of selves
- Record heights by ages in fall and after Easter and prepare charts
- Life size mural of each student using the human body outline, e.g. sketching in digestive system

UNIT TITLE: HUMAN BIOLOGY

CONCEPTS	BEHAVIORAL OBJECTIVES
CONDITIONING AND RESPONSE	As a result of this unit, each child will be able to:
Social Studies	
People behave differently because of different stimuli and conditioning People form habits because of conditioning Responses can be inborn or learned	List examples of inborn and learned responses List habits and how they were formed State examples of or to deduce how learning or habits can be changed Give examples of stimuli Demonstrate learning by trial and error
Language	
The nervous system causes the body to respond to stimuli and to be conditioned by them	Identify, draw and/or label the parts of the nervous system Deduce how the other systems are related to the nervous system
People develop and use a language because of conditioning	Discuss ways in which people form opinions of others by their physical appearance
People become conditioned to signs and symbols	Compare and contrast our language with another
Learning to read is a process of conditioning and responses	Label signs and symbols and give reasons why we have them
	Identify meanings of body language

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Role playing experiences:	
Pantomiming to show how the body can be used for expression	
Activities:	
Movie showing body language	
Make wooden mazes, time yourself to see how much faster you can do it, after you have done it once	
Take a new name and see how long it takes to respond to it	
Form opinions of people from observations and pictures	
Learn some of another language	
Make up a code for others to decipher	
Make a list of individual habits, then compare and contrast them	
Try to change a habit, then tell the class how you went about it, if it was successful or not, and how long it took	
Write about a belief you have, how you came to believe it, and what would have to happen for you to change your belief	
Select opposing beliefs and have a debate	
Make signs with symbols of your own	
Present various stimuli, one at a time, to students, then share their various art interpretations of the same stimuli	
Make different sounds, or play music, and either write about or discuss different people's reaction to that stimuli	
Have children think of "sound symbols," i.e. sirens, alarm clocks, etc. produce them to the class with their heads down, and have them tell what the sounds represent	

UNIT TITLE: HUMAN BIOLOGY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math People are conditioned to use certain currencies, different units of measure, and time schedule	Record how long it takes to learn to respond to new stimuli Make a metric system conversion By using a different alphabet or code, "read" or decode a message
Art Art expression is based upon stimuli and the response to that stimuli	Design their own symbols and meanings
Careers Servicing advertising Managing researching designing Personnel training	Produce an advertisement using attention-getting signs and symbols Develop opinion poll for product research based on package appeal Describe how conditioning and response is a part of animal training

METHOD OF IMPLEMENTATION

RESOURCE PEOPLE & MATERIALS

Make copies of mazes from Detroit News Magazine section and give to children to check their times with the experts

Have them draw their own mazes, put on dittos, and distribute to class

Write commercials, jingles, and/or make advertising posters with special emphasis on what stimuli, i.e. color, size, art, causes people to notice and/or remember them

Sociologists study people and their behavior

Psychologists and psychiatrists diagnose and/or treat people who need help in coping with their problems, some of which are caused by conditioning

Doctors treat people for nervous disorders

Advertising people study people's reactions to certain stimuli so that they are able to sell a product more easily

Fashion designers create designs which they hope will appeal to people

Animal trainers condition animals to respond to certain stimuli

UNIT TITLE: HUMAN BIOLOGY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
DENTAL HEALTH Science Functions of the teeth Structure of the teeth Dental diseases, abnormalities, and accidents Control of dental disease by: a) the dentist and his health team b) the individual c) nutrition and diet d) floridation of water	As a result of this unit, each child will be able to: List three functions of teeth Draw and label the parts of a tooth Describe the roles of the dental health team Identify four products used in the prevention of tooth decay Plan a sugar free diet Apply proper method of tooth brushing Formulate a rationale for the floridation of water
Math Measuring Fractions Charts and Graphs	Organize data into a graph or chart Discuss critically the meaning of the ADA seal used on products Relate the functions of five tools used in dentistry Distinguish between the seven specialities in dentistry
Language Arts Interview techniques Spelling and vocabulary - dental terms Creative writing - stories, commercials Reading and research skills Dramatization (The Toothache Mystery) Labeling - diagrams and display table Record keeping - daily brushing; diet Critical analysis of advertising Letter writing - information, thank you	Describe the four types of teeth and their uses List proper tooth care

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
DENTAL HEALTH	
Show moview models filmstrips	
Use with a dental resource person tooth brush and paste and color agent cleaning teeth brush on color-check for cleanliness	
Draw baby teeth, permanent teeth label tooth use	
Draw one tooth - label parts	
Do research on one of these: tooth pastes, powders, cleaners floridation decaying process of food sugar free diet	
Study "Colgate" materials, posters, booklets	
Dentists American Dental Association 7 specialities worker categories who assist the P.S.S. on the dental health team tools (5) of dentistry machines - x-ray - chairs, etc.	Dentist Dental assistant Students from SEOVEC
Collect pictures Smiles Tooth product advertising	
Tooth puzzle	

UNIT TITLE:

CONCEPTS	BEHAVIORAL OBJECTIVES
DENTAL HEALTH	As a result of this unit, each child will be able to:
Career Concepts	
Products produced for consumer Supplies and equipment for dentist's office Advertising of products Tools used in dentistry Service careers in Dental Health	List and describe 5 occupations centered around dental health

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

UNIT TITLE: HUMAN BIOLOGY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts Letters Research and written reports Reading for information Oral discussion Word origins in anatomy Interviewing	Make a life-size mural showing functions of one system of the body as a member of a committee Prepare and discuss critically, as a committee member, a report on the selected body system Gather data and write a booklet about nutrition, incorporating the four groups of food and menus containing the correct balance of these food groups
Science Systems of the body Nutrition calories 4 basic food areas Vaccines Medicines	Be able to classify food correctly, as to the basic 4 groups at the 70% level List 2 herbs used in medicine in colonial times and today
Social Science Group dynamics Geography of foods	Investigate and collect data into a chart of seasonal food availability Participate in a brain-storming experience to develop questions to be used in interview of a nurse, a doctor, hospital personnel, a produce farmer, an ambulance service owner or a dietition

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
HUMAN BIOLOGY - Nutrition Show movies models filmstrips Make a human shape containing a body system - label it Use research material Visit Beaumont Hospital Visit Ambulance Service Visit Oakland County Health Department Visit by a food inspector Visit by a pharmacist Visit by a restaurant owner or visit a restaurant Visit by a physician Visit by school nurse Visit by a produce farmer	

UNIT TITLE: HUMAN BIOLOGY (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
Art Styrofoam construction	As a result of this unit, each child will be able to:
Careers Servicing Diagnosis and treatment Producing	Be able to list 10 jobs in the medical service industry List childhood vaccines given to Michigan children Describe the progression from soil preparation and planting to harvesting and marketing a specific food product Be able to list four jobs in the food preparation industry either hospital or restaurant List the government agencies which pertain to food and drugs Describe how a physician uses a diagnosis to prescribe proper care
Math Measurement Liquid Dry	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Visit Royal Oak Farmers Market in September or October looking for any of the following items: sweet corn lettuce squash potatoes onions green beans peas eggs honey radishes melons tomatoes grapes berries beets green sweet peppers carrots Mark charts of states and federal laws which control the kinds of drugs and medicines on the market, the purity of foods, the weights, (e.g. the laws about hotdogs)	

ACTIVITY

TYPES OF TEETH

1. Tools necessary for each item to be made:

   Mirrors

2. Materials necessary for each item to be made:

   Collection of pulled teeth
   (May be obtained from local dentist or dental school)

3. List the approximate number of students to be involved in each segment of activity.

   Entire class

4. List (chronologically) a step by step procedure for each activity being made in the unit.

   1. Talk about the different types of teeth and their uses.
   2. Identify the various types of teeth from collection.
   3. Try to locate these same teeth in each individual's mouth.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PARAFFIN MODELS OF TEETH

II. ACTIVITY FORMAT:

A. Tools and Materials

Paraffin
Plaster of Paris (quick setting powder to be mixed with water)
Bowl for mixing

B. Human Aides and Resources

Parents
College students

C. Procedures for this activity (with helpful hints)

1. Bite on paraffin which has been slightly warmed.
2. Fill paraffin model with plaster of Paris.
3. Allow to harden.
4. Illustrate occlusion.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TEETH MODEL

II. ACTIVITY FORMAT:

A. Tools and Materials

Elmer's glue
White crustless bread
White paint
Ceramic clay
Paint
Brushes

B. Human Aides and Resources

Supervisor

C. Procedures for this activity (with helpful hints)

1. Break crustless white bread into little pieces.
2. Mix Elmer's glue and white paint until kneadable.
3. Shape each tooth.
4. Dry over night.
5. Form lower plate out of clay.
6. Insert teeth.
7. Dry for 4 days.
8. Paint gum.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TEETH - DIGESTION EXPERIMENT

II. ACTIVITY FORMAT:

A. Tools and Materials

Glass jars
Sugar - granulated (1 teaspoon)
Sugar cube
Water

B. Human aides and resources

Entire class

C. Procedures for this activity

1. Fill both glass jars with equal amounts of water.
2. Drop the two types of sugar in the jars at the same time.
3. Observe
4. Discuss how chewing would help in digestion.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

EXPERIMENT - DECAYING PROCESS OF TEETH

II. ACTIVITY FORMAT:

A. Tools and Materials

Apples
Bowl

B. Procedures for this activity (with helpful hints)

1. Bruise apples.
2. Put apple in bowl with other apples.
3. Wait a week or two.
4. Observe expansion of bruise.
5. Observe decay of apples that touch bruised one.
6. Relate this decay to that of teeth when cavities aren't filled.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ACID'S AFFECT ON TEETH (EXPERIMENT - EGG SHELL AND VINEGAR DEMONSTRATION TO ILLUSTRATE HOW ACID ON TEETH BREAKS DOWN ENAMEL)

II. ACTIVITY FORMAT:

A. Tools and Materials

Eggs
Vinegar
Small bowl

B. Procedures for this activity (with helpful hints)

1. Break eggs.
2. Have children feel hardness of shell.
3. Drop shell into bowl of vinegar.
4. In a few hours, let children see how easily it breaks.
5. Return shell to vinegar - overnight.
6. Observe softness of shell.
7. Compare with action of acid on teeth.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children were amazed at how fast acid can break down enamel.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

EXPERIMENT - HOW ACIDS DISSOLVE CALCIUM FROM STERILIZED, EXTRACTED TEETH

II. ACTIVITY FORMAT:

A. Tools and Materials

Extracted teeth from dentist
One percent solution hydrochloric acid
Two small glasses

B. Procedures for this activity (with helpful hints)

1. Place one tooth in one percent solution hydrochloric acid.
2. Place another tooth in plain water.
3. Allow to stand for one week.
4. Shows softening.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

USING DISCLOSING TABLETS TO CHECK ON PROPER, CAREFUL TOOTH BRUSHING

II. ACTIVITY FORMAT:

A. Tools and Materials

Disclosing tablets
Toothbrush
Toothpaste
Mirror
Water
Sink

B. Human Aides and Resources

Dental office assistants from SEOVEC

C. Procedures for this activity (with helpful hints)

1. Brush teeth.
2. Chew disclosing tablet.
3. Look in mirror for red spots - these are areas that were missed in brushing.
4. Brush again - check.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TOOTHPASTE

II. ACTIVITY FORMAT:

A. Tools and Materials

Salt
Baking soda
Mouthwash
Paper plates

B. Human Aides and Resources

Supervisor
Oakland County Health Department

C. Procedures for this activity (with helpful hints)

1. 7 pounds salt
2. 7 pounds baking soda
3. Enough mouthwash to make paste
4. Store in pill bottle or tin foil

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DEMONSTRATE : "TOOTHBRUSH FOODS" (such as apples and carrots) VERSUS "STICKY FOODS" (such as candy and marshmallows)

II. ACTIVITY FORMAT:

A. Tools and Materials

Knife
Cutting Board
Foods such as apples and carrots
Sweet foods such as marshmallows or candy

B. Procedures for this activity (with helpful hints)

1. Cut toothbrush food - show clean edge of knife.
2. Cut sticky foods - show how it sticks to knife.
3. Explain that this is how food sticks to teeth and holds on to the enamel.
4. Therefore - we should eat less sticky, sweet foods and brush teeth often.
5. Pass out "toothbrush foods" for children to eat.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SWEETLESS PARTY

II. ACTIVITY FORMAT:

A. Tools and Materials

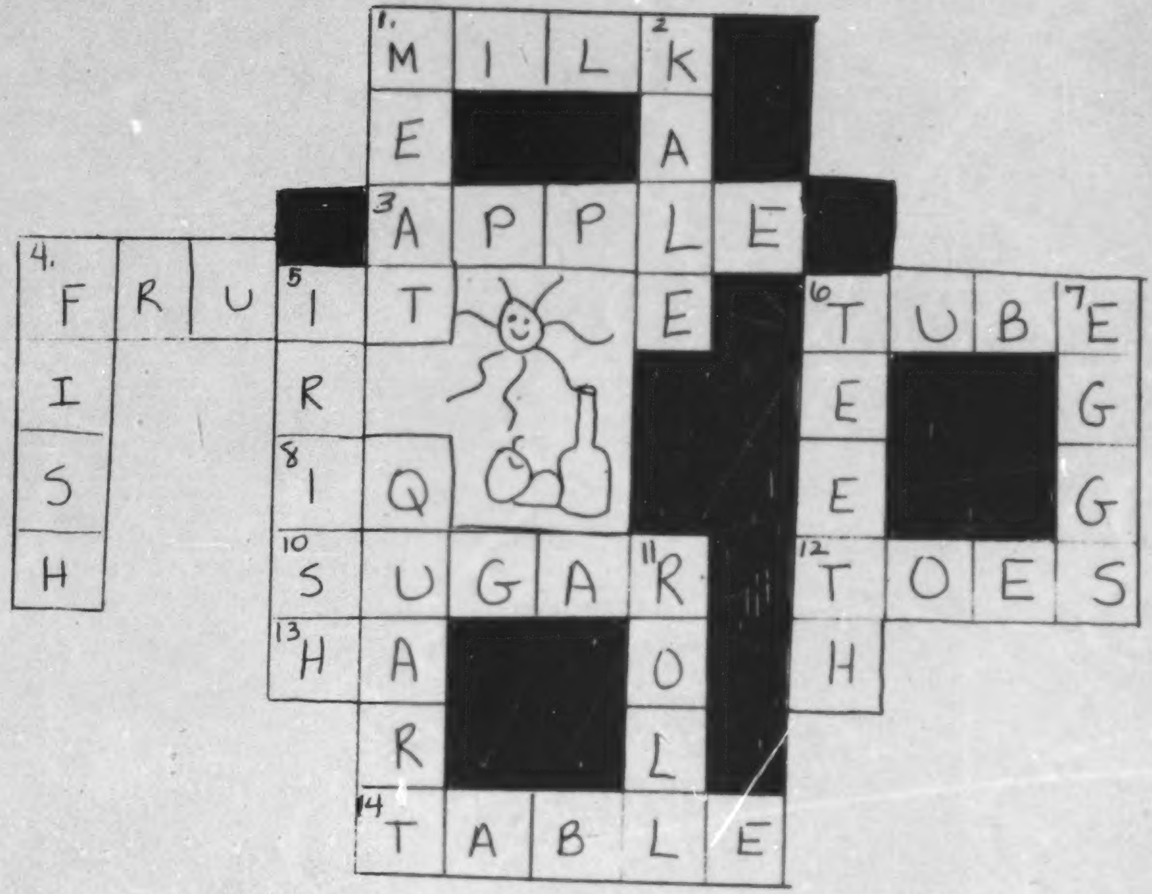
Sugarless foods
Apple cider
Popcorn
Crackers/cheese
Potato chips
Pretzels
Peanuts
Sugarless gum
Unsweetened fruit juices
Carrot sticks
Radishes
Stuffed celery
Fruit
Meat (hot dogs)
Tooth picks

B. Human Aides and Resources

Parents
College students

C. Procedures for this activity (with helpful hints)

1. Have the children plan what foods they would like for their party.
2. Assign foods for children to bring.
3. Assign utensils - i.e.: bowls, napkins, cups, popcorn popper, ingredients, can opener.
4. Set up stations for various foods.
5. Serve.

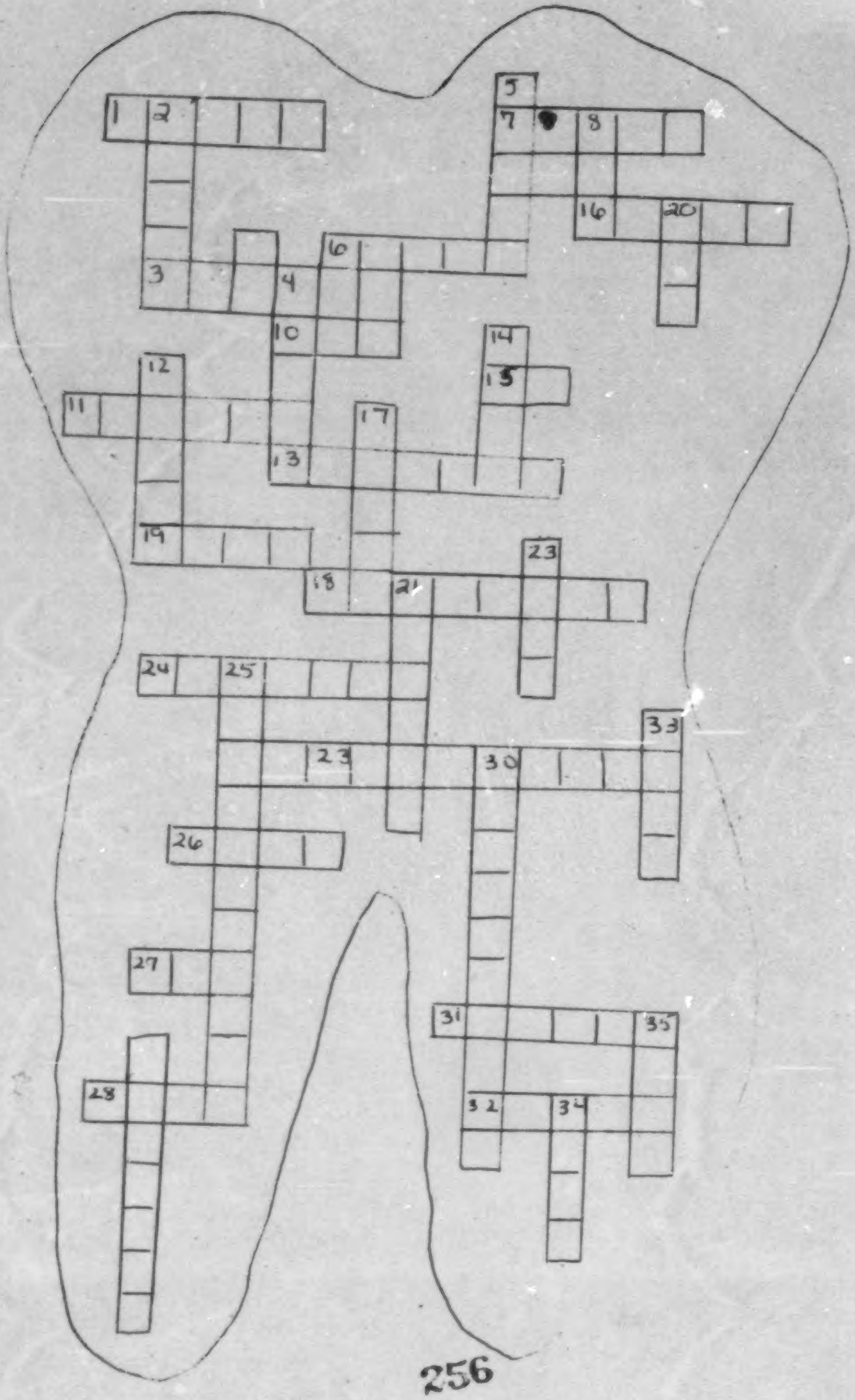

1. M I L 2 K
E A
3 A P P L E
4. F R U 5 I T E 6 T U B 7 E
I R E G
S 8 I Q E G
H 10 S U G A 11 R 12 T O E S
13 H A O H
R L
14 T A B L E

ACROSS

1. The best food of all
3. Gives chewing exercise
4. Grows on trees and vines
6. What toothpaste comes in
8. You have a good one if you work this puzzle
10. Not so good for teeth
12. You had twice as many baby teeth as you have _______
13. Add "bit" and be sure that toothbrushing is one
14. Elbows off at mealtime

DOWN

1. One serving a day to grow
2. A green, leafy vegetable
4. They are hard to catch
5. A kind of potato - one a day
6. Right foods help build good, strong ones
7. A source of Vitamin D - you should eat one a day
9. You need this much milk every day
11. Better for teeth when made with whole wheat flour



CROSSWORD TOOTH KEY

ACROSS

1. One of the nicest things to be greeted with is a smile .
3. The root of the tooth is that part that holds the tooth in the mouth.
6. Disease of the teeth is called decay .
7. We should eat an apple a day.
10. We should brush our teeth right after we eat .
11. The name of an orange colored vegetable carrot .
13. Enamel is the hardest substance in our body.
15. The lower teeth should be brush up (direction).
16. Tooth paste is sometimes put on our toothbrush to help clean our teeth.
18. The front teeth that help to cut our food are called incisors .
19. Decayed teeth may hurt .
22. There are thirty-two teeth in a full permanent set of teeth
24. An orange colored fruit that is high in Vitamin C would be oranges (pl.);
26. Milk is the best beverage for us to drink.
27. Some people chew gum and it is bad for their teeth.
28. Can you think of a protein we should eat everyday to give our teeth chewing exercise? Meat
31. A picture of our teeth to show the inside of them is called x-ray .
32. Foods with much sugar in them cause rapid decay.

DOWN

2. A tooth in the back of our mouths that helps us to grind our food is called a molar .
4. Teeth help us to eat, talk and make us look as we do.
5. A sticky, sweet food which speeds decay is candy .
8. A sweet drink that is bad for our teeth is pop .
9. We should see the dentist two times a year.
10. We should brush our teeth right after we eat .
12. To clean our teeth, we brush them.
14. The pink skin around our teeth is called gums .
17. The crown is the white part of the tooth that we see in our mouths.
20. We are about six years old when we get our first permanent teeth.
21. The tooth helps us to tear food. (It is also called the eye tooth) cuspid
23. The bacteria use sugar as food and produce acid.
25. We should make an appointment with the dentist before we go to see him.
29. A doctor who takes care of our teeth is called a dentist .
30. A toothbrush should have a straight back.
33. The upper teeth should be brushed down (direction).
34. In order to have good strong teeth we must eat good food.
35. We would like all of you go get your dental card in during the school year.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

OCCUPATION MURAL FOR DENTAL HEALTH

II. ACTIVITY FORMAT:

A. Tools and Materials

5' x 2' large white paper
construction paper
magazines
scissors
paste
felt pen
yarn (optional)

B. Procedures for this activity (with helpful hints)

1. List on board occupations concerned with dental health.
2. Cut out or make pictures showing these occupations.
3. Out of construction paper make a large tooth.
4. Place tooth in middle of large white paper.
5. Arrange occupations around tooth.
6. Label pictures and connect to tooth either by drawing a line or by yarn.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTING MAZES

II. ACTIVITY FORMAT:

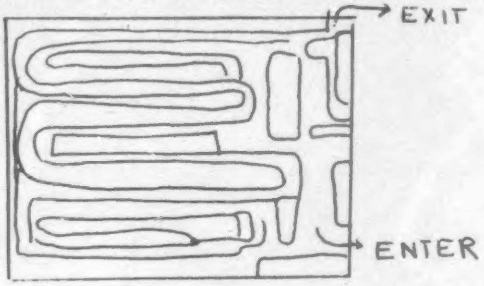
A. Tools and Materials

Wood (or heavy cardboard)
Saws
Glue, or nails -
(depending on thickness of wood)

Paper
Pencil
Ruler
Carbon or ditto paper

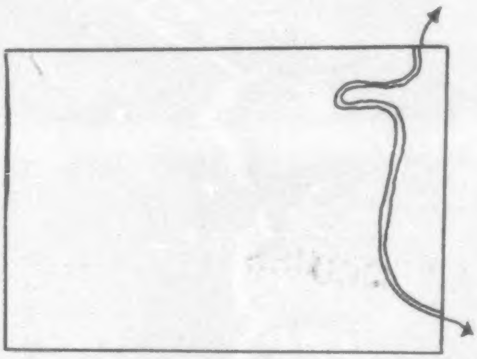
B. Procedures for this activity (with helpful hints)

1. Copy or make up an original maze on paper.
2. Trace maze onto an appropriate piece of wood or heavy cardboard with carbon paper or ditto.
3. Cut pieces of wood to dimensions of the lines.
4. Glue or nail those pieces to the pattern on the wood.



RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

It is best to have them glue the path in first, then add the other pieces. Some of the children closed their path and didn't realize it.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAZE AND TOWER OF HANOI

II. ACTIVITY FORMAT:

A. Tools and Materials

Saws	Dowel rods
Glue	Wood for Towers of Hanoi
Paint	

B. Procedures for this activity (with helpful hints)

I. Maze

- a. Reproduce a maze (good ones are in Sunday's Detroit News Magazine)
- b. Time students
- c. Time a second time
- d. What conclusions do they form?
- e. Have the students fake hitting the person next to them. What happens? Why?

II. Towers of Hanoi

- a. Saw a rectangle of wood - 12" x 4" x 1"
- b. Drill 3 holes to match diameter of dowel rods
- c. Glue dowel rods in holes
- d. Saw 5 discs of decreasing diameters (object is to move the 5 discs one at a time to another dowel rod without placing a larger disc on a smaller one)

QUESTIONS

1. Do you help with operations?
2. What do you like about your job?
3. What don't you like about your job?
4. How many years of schooling is required to be a nurse?
5. What an EKG?
6. Do you like being a nurse?
7. Do you work at a desk?
8. Why did you want to be a nurse?
9. What were your favorite subjects?
10. What school do you go to for training?
11. Do you know how to take out stitches?
12. What kind of nurse is she? How many kinds of nurses are there?
13. Do you give shots?
14. Do you work long hours?
15. What do you like best about your job?
16. Can you start an IV?
17. Do you give blood transfusions?
18. Did you ever see a heart operation?
19. Have you ever assisted in a brain operation?
20. How long have you been a nurse?
21. Have you ever given a TB test?
22. How do you feel when you see someone badly hurt?
23. How could you help someone with a hearing problem?
24. Can you read doctors' prescriptions?
25. What kind of patients do you have?
26. Have you ever seen a kidney transplant?
27. How many people have you worked on?
28. Do you answer phones at the hospital?
29. Did you ever see an amputation?
30. How do nurses help during operations?
31. Has any patient died while you were there? How did you feel?
32. What are some of the instruments you use?
33. Does it take a lot of studying to be a nurse?
34. Do badly burned people come to the hospital?
35. Did you ever have a red code?
36. Did you ever have a patient who was shot?
37. What hospitals have you worked in?
38. What is an anurism?
39. If someone had a hand cut off, could another one be transplanted on?
40. What are the most important instruments you use?
41. Have you ever ridden in an ambulance?
42. Have you ever worked with babies in the hospital?
43. What causes a dislocation of the hip?
44. Do you work on holidays?
45. Were you ever a patient in the hospital you work in?
46. Did you ever see anyone with bad polio?
47. Have you ever seen a patient being rushed into the emergency room?
48. Did you ever treat an epileptic?
49. Did you ever work in X-rays?
50. Were you ever badly hurt and had to be rushed to the hospital?
51. Is there a place in the hospital that is quarantined?
52. Have you ever seen a tumor?
53. Did you ever take blood for tests?
54. How many patients do you treat each month?
55. Are you short on blood donations at the hospital?

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DOUGHNUTS - SMALL BUSINESS

II. ACTIVITY FORMAT:

A. Tools and Materials

Order paper
Electric fry pan
Brown paper
Oil
Puffin Buttermilk biscuits
Granulated sugar
Cinnamon
Pencils
Wax paper
Bowls
Hole maker
Napkins
Paper plates

B. Human Resources

Parents
Student helpers
Principal
School Secretary

C. Procedures for this activity (with helpful hints)

1. List jobs
2. Diagram jobs on assembly line
3. Elect manager
4. Make up application form for jobs
5. Apply for jobs
6. Interview for jobs
7. Distribute jobs
8. Set up assembly line stations
9. List out supplies needed from recipes
10. Figure quantities of doughnuts to be made
11. Figure out quantities
12. Make out application for loan
13. Interview for loan
14. Figure interest to be paid on loan
15. Pick up loan and sign for loan and date to be paid
16. Purchase supplies
17. Make advertisement posters
18. Place supplies on stations on assembly line
    a. Openers - open packages
    b. Separators - separate biscuits
    c. Hole makers - poke hole in biscuits (let rise)
    d. Cookers - let oil heat (medium)
    e. Turners - place in oil and turn when brown
    f. Removers - remove from oil to drain on brown paper
    g. Place on paper plates
    h. Fill orders and place in paper bags
19. Cashiers
20. Order takers

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Outstanding - the children took over completely on responsibilities.

	NUMBER	COST
CINNAMON		
PLAIN		
SUGAR		
TOTAL		COST

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: MACHINES

GRADE LEVEL: 3-4

GENERAL OVERVIEW: By exploring the six simple machines through hands on experiences and activities involving mass production, children will appreciate how work is eased by machinery.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
Tools for Andy, James Tippett (Abington-Cokesbury Press
Man and His Tools, William Burns (McGraw-Hill Book Co.)
Child's Book of Carpentry, Jeanne Taylor (Greenberry Publishing)
True Book of Tools for Building, Jerome Leavett (Children's Press)
Woodworking, Roger Lewis (Alfred A. Knopf)
What Does It Do and How Does It Work, Russell Hoban (Harper Bros. Pub.)
Machinery, Darby
Machines, Adler
Machine Experiments, Sootin
Machinery, Saunders
Simple Machines, Stone
About Wonderful Wheels, Feenie Ziner
Friction, Edward Victor
Levers, Lisa Miller
Simple Machines and How They Work, Elizabeth Sharp
What is a Machine, Boleslaus Syrocki
What is a Simple Machine, Gene Darby
Wheels, Lisa Miller
Royal Oak Science Guide
Probe
Third grade science text - Mallinson
Blough - Schwartz: Elementary School Science
3rd edition - Holt, Rinehart & Winston

Films:
ABC of Tools
Simple Machines
Wheels, Wheels, Wheels
Machines Make Work Easier
What is Automation?

Film loops:
Simple Machines

Filmstrips:
- Finding out about Simple Machines
- What my Father Does - What my Mother Does
- How Wedges Help Us
- How Wheels Help Us
- Levers At Work
- How Ramps and Screws Help Us
- Pulleys

Realia:
- Gears
- Levers
- Pendulum
- Water Wheel
- Wheel and Axle
- Screws
- Nails
- Pulleys

2. Field Trips:

- SEOVEC - Machine Shop and Woodworking
- Greenfield Village
- Tool and Die Shop
- Ford Motor Company - Wixom Plant
  - Rouge Plant
- Pontiac Motor Car Company
- Lumber Yard
- Bakery
- Building Site

3. Resource People:

- Parents, aides and guest speakers
- Builders in area
- Plant managers
- College students
- Custodian
- Mailman
- Secretary
- T.V. Actress
- Employee from tool company

4. Activities:

- Mass production - kites, book markers, note paper, model trucks
- Six experiments with simple and complex machines
- Wheel and axle and inclined plane
- Screws
- Letter holder
- Abacus
- Gears
- Pencil holder
- Levers

UNIT TITLE: MACHINES

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science	
6 simple machines	Differentiate the 6 basic simple machines
Complex machines	Identify simple machines found in complex machines
Tools	Use six simple machines Apply proper use and care of tools
Math	
Measurements	Measure distance, volume and time
Social Science	
Machines affect on man	List ways machines help man Discover how machines make work easier
History of tools and machines	Describe the history of tools

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Activities involving simple machines	
Activities	
Group discussion reading and research	

UNIT TITLE: **MACHINES (continued)**

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Creative writing	Write a story
Research	Read and research an aspect of machinery
Choral reading	Participate in choral reading
Careers	
People and their job roles	
Tools Management Producing Servicing	Explain the concept of mass production Describe how machines are used to to produce products and services

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Activities Guest speakers and field trips	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SIX EXPERIMENTS WITH SIMPLE AND COMPLEX MACHINES

II. ACTIVITY FORMAT:

A. Tools and Materials

Claw hammer and nail
Hand drill with gear
Brace and bit
Screw driver and screw
Blocks of wood
Inclined plane and pulley from IMC

B. Procedures for this activity

Each child performs the six experiments and records observations on given sheet.

1. Pound nail into wood block with claw hammer.
2. Drill hole using hand drill into wood block.
3. Drill hole using brace and bit into wood block.
4. Write up differences in using the hand drill and brace and bit.
5. Using screw driver, turn screw into wood.
6. Using the IMC pulley display write up observations in lifting different weights.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

INCLINED PLANE AND WHEEL AND AXLE

II. ACTIVITY FORMAT:

A. Tools and Materials

Long board
Roller skate
Large rubber band
Ruler

B. Human Aides and Resources

Royal Oak Science Guide M-8

C. Procedures for this activity (with helpful hints)

1. Use a board to make an inclined plane.
2. Attach the rubber band to the roller skate.
3. Pull the skate (on its side) up the board.
4. Measure the length of the rubber band.
5. Try it a second time using wheels.
6. Alter the slant of the board and try again.
7. Explain the reasons for the difference in length of the rubber band.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

GEARS

II. ACTIVITY FORMAT:

A. Tools and Materials

Plywood
Nails
Scrap wood
Dremel saw
Hammer
Cardboard

B. Procedures for this activity (with helpful hints)

1. Trace a circle on cardboard.
2. On its outer edge draw ridges to assimilate a gear.
3. Cut out.
4. Use the gear as a pattern for making gears on a larger circle.
5. Cut out.
6. Trace the 2 patterns on plywood.
7. Cut out wheels with dremel saw.
8. Using a nail and hammer punch a hole in the center of each wheel.
9. Make a handle out of a small block of scrap wood and nail on to one of the wheels.
10. Fasten the 2 wheels to a large piece of wood - side by side.
11. Turn the handle. The 2 wheels should move in opposite directions. The smaller wheel should move at a faster rate than the large wheel.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LEVERS

II. ACTIVITY FORMAT:

A. Tools and Materials

2 x 6 board 1/2" thick
Short 2 x 4 to be used as a fulcrum

B. Human Aides and Resources

Royal Oak Science Guide M-9

C. Procedures for this activity (with helpful hints)

1. Use board for teeter totter.
2. In different positions experiment with lifting, pushing, balancing.
3. Explain what was observed.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LETTER HOLDER

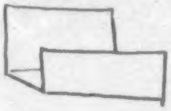
II. ACTIVITY FORMAT:

A. Tools and Materials

Dremel saw
Sandpaper
T-square
Paint brush
2 1" nails
Woodburning tool
Varnish
4 x 1/2 board - running feet to be cut into 6" pieces

B. Procedures for this activity (with helpful hints)

1. Measure 6" long 4 x 1/2 wood.
2. Measure 6" piece into 3 sections - width 2 1/2 - 2 - 1 1/2.
3. Cut measured pieces.
4. Nail 1 1/2" piece bottom
   2 1/2" piece back
   2 " piece front



5. Burn design on front.
6. Sand
7. Varnish

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ABACUS

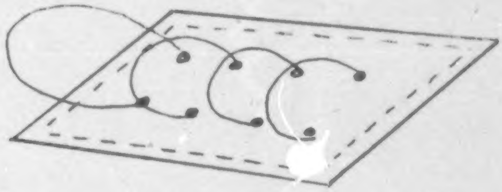
II. ACTIVITY FORMAT:

A. Tools and Materials

- Saws (cross cut and dremel)
- Drill
- T-square
- Template for holes to be drilled
- Wood
- Beads (red, blue, yellow, green 100 per color)
- Wire
- Sandpaper
- Pencil
- Ruler
- Elmer's glue
- Reed

B. Procedures for this activity (with helpful hints)

1. Measure blocks of wood 9" long, square the edges and sand smooth.
2. Measure and mark 1" from each end and 1" from each edge.
3. Mark where holes are to be drilled (2 rows of holes 1 3/4" apart).
4. Drill holes
5. Cut reed to 10" lengths.
6. Soak in water 24 hours.
7. Thread beads of one color on each of four cut reeds.
8. Place drop of Elmer's glue in hole, gently bend reed and insert in holes.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PENCIL HOLDER

II. ACTIVITY FORMAT:

A. Tools and Materials

- Cross cut saw
- Drill
- T-square
- Wood (2x2x4)
- Sandpaper
- Paint brush
- Varnish
- Woodburning tool

B. Procedures for this activity (with helpful hints)

1. Measure 4" piece of 2 x 2.
2. Using a cross cut saw cut the piece of wood.
3. Measure 1" from each edge.
4. Drill holes in the wood within the edge.
5. Burn a design
6. Varnish

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

KEY CHAIN

II. ACTIVITY FORMAT:

A. Tools and Materials

1/4 plywood (3 x 3)
Beaded chain (at Frentz)
Acrylic paint
3 paint brushes
Clear varnish
Sandpaper
Carbon paper

B. Procedures for this activity (with helpful hints)

1. Cut wood into 3 x 3 pieces and drill hole for chain.
2. Sand smooth.
3. May be own design - lay design on carbon paper on top of wood - transfer design.
4. Paint design using acrylic paint.
5. After dry (next day) apply clear varnish.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

NOODLE KNACHER (LET Me Tease You)

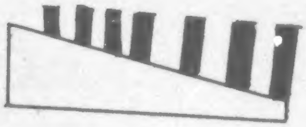
II. ACTIVITY FORMAT:

A. Tools and Materials

(2 x 4) 14" level
1/2"dowel (about 24")
Saber saw
Sandpaper
Drill and bit

B. Procedures for this activity (with helpful hints)

1. Cut (2 x 4) at angle
2. Space hole every 2 inches (6)
3. Drill holes with drill and bit at different depths.
4. Cut dowels so when in holes they are all on the same level
5. Please note dowels will be different lengths because holes are different depths.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LINE PRODUCTION - KITE MAKING

II. ACTIVITY FORMAT:

A. Tools and Materials (Materials for 30 kites)

5 - 90 feet of brown craft paper - 3 feet wide
60 lengths of wood strips 1/8 x 1/4 x 3 feet
3 - 100 feet of kite string
One roll - 20-24 gauge soft aluminum wire
1 box gum reinforcements
Assorted tempera paints
Assorted rags for kite tail
1 quart rubber cement

B. Procedures for this activity - Refer to model kite for detailed measurements

Make labels for work stations

1. Cut paper to shape using template.
2. Use template to mark four fold lines and punch 2 holes.
3. Fold along lines.
4. Attach 2 gum reinforcements.
5. Use fixture to cut string to length - 2 pieces 100" length 30" length.
6. Use fixture to cut wood strips to two lengths (see your kite model).
7. Notch ends.
8. (Optional) Drill hole in each wood strip (see your kite).
9. Wire strips of wood together.
10. Cut cloth for tail.
11. Tie lengths together.
12. Tie string using fixture and glue paper.
13. Inspect.
14. Paint design on paper.
15. Attach wood strips to kite.
16. Attach flying string to kite.
17. Cut and attach bow string.
18. Attach tail.

Equip stations with tools

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BOOKMARKS

II. ACTIVITY FORMAT:

A. Tools and Materials

Scissors
Pencils
Tooth picks
Felt scraps
Glue
Patterns

Decorations
(Rick-rack,
sequins,
glitter,
ribbons)

B. Procedures for this activity (with helpful hints)

Two assembly lines and one control group for comparison.

Assembly Line Stations

1. Tracers) _ main body of
2. Cutters) bookmark

3. Tracers) _ design or decoration on
4. Cutters) one end of bookmark

5. Feature tracers
6. Feature cutters
7. Decoration adders
8. Gluers
9. Inspectors

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING NOTEPAPER FOR MOTHERS

II. ACTIVITY FORMAT:

A. Tools and Materials

Paper cutter	Small-size business envelopes
Rulers	Small boxes from home
Scissors	
Bond paper	

B. Human Aides and Resources

Some from Hallmark (or some other business which profits from sentimentality).

Older grade children for assembly assistance.

C. Procedures for this activity (with helpful hints)

Set up assembly line in Y formation:

1. On one leg of Y, assemble odds and ends and crayons for designing of envelopes. This station could handle five or six.
2. On other leg of Y, assemble two substations:
   a. 4 children folding precut rectangular pieces of paper
   b. 4 or 6 children creating designs on folded notepaper.
3. Quality control at merging of lines.
4. 3 children slipping notepaper sheet with each envelope.
5. 3 children placing 12 notepapers and envelopes in box.
6. 3 children wrapping finished products.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

BUILDING OF MODEL TRUCKS

II. ACTIVITY FORMAT:

A. Tools and Materials

Board of tools
Extension cord
Lumber
Wheels
Thumbtacks
Axle material (coat hangers)
1/2" doweling

B. Human Aides and Resources

College students to assist precutting and on line
2 fathers of students: Auto Design Man - Machine Builder

C. Procedures for this activity (with helpful hints)

1. Measure axle guide lines on bottom of flat bed
2. Attach engine block to flat bed
3. Attach cab to flat bed
4. Drill hole by adult for steering column
5. Attach seat to flat bed
6. Use template, mark and drill doweling hole
7. Using guide lines, nail staples to bottom of flat bed
8. Rough and fine sand edges of trucks
9. Inspection
10. Cut axles to 4 1/2" lengths
11. Attach one wheel to axle
12. Slip axle through staples and attach other wheel
13. Inspect wheel alignment
14. Attach headlights
15. Glue and insert four precut pieces of doweling in truck bed
16. Final inspection.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

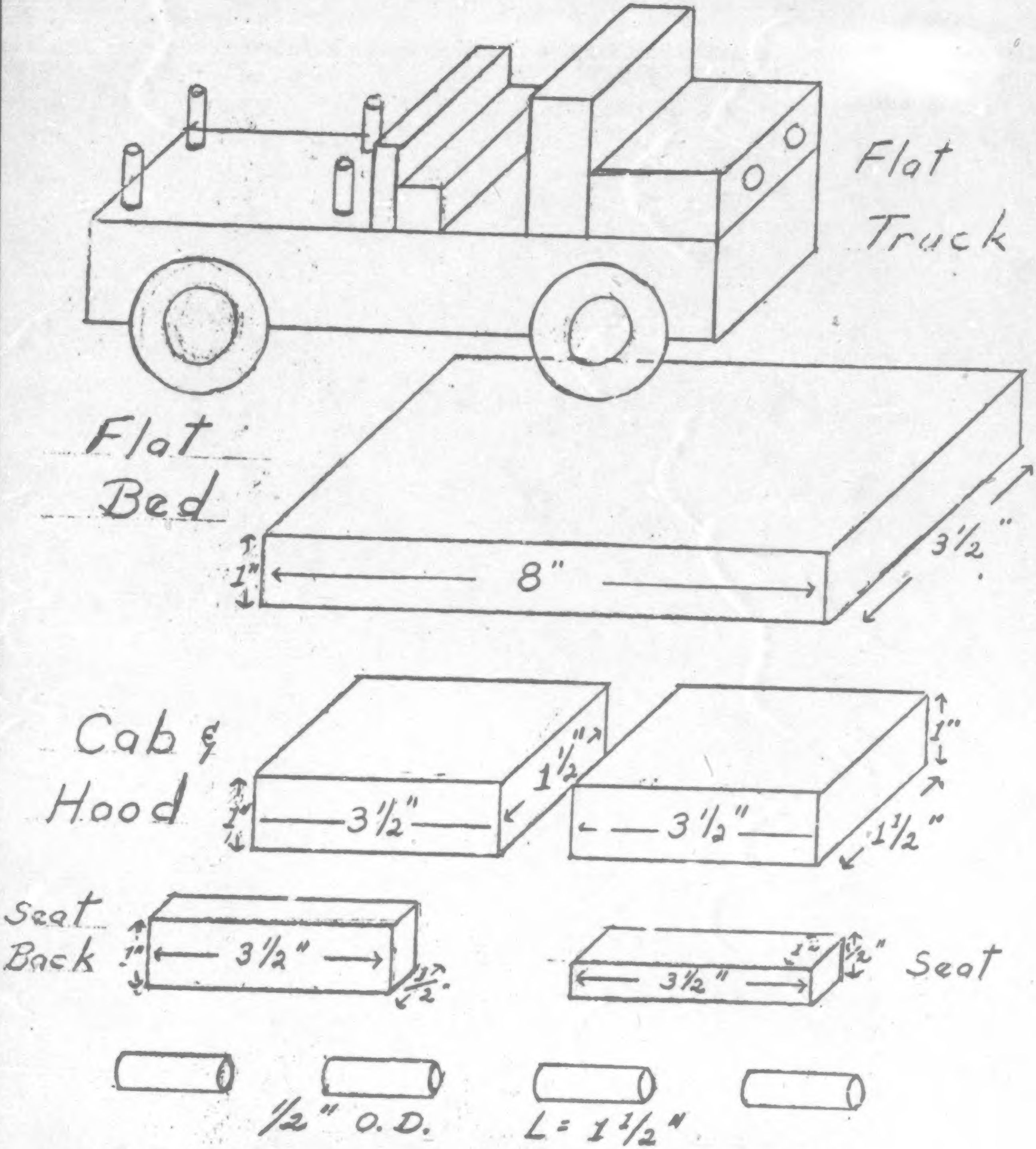
Children selected one truck and applied: 1) linseed oil; 2) first coat of latex paint; 3) second coat of latex paint; 4) highlights using acrylic paints (brushes clean with soap and water if done quickly).

TRUCK MASS PRODUCTION

Parts List Per Truck (Multiply number of parts of length of wood to determine total material needed for class).

4 wheels
*2 coathanger wire, 4 1/2"
4 1/2" Staples
*1 Pine, 3/4" x 1 1/2" x 8"
*1 Pine, 3/4" x 3 1/2" x 8"
8 Brads
4 1/8" I.D. - 3/8" O.D. Steel Washers
*2 1/2" x 1" x 3 1/2" Pine
*4 1 1/2" x 1/2" O.D. doweling

Assembly line will have to be planned to fit your individual classroom with electrical outlet taken into consideration.



Flat
Truck
Flat
Bed
1"
8"
3½"
Cab &
Hood
1"
3½"
1½"
1"
3½"
1½"
Seat
Back
1"
3½"
½"
1"
½"
3½"
Seat
½" O.D.
L = 1½"

Plan Sheet for Flat-bed Truck

Ditto completed and included!

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING HOLES THROUGH A BLOCK OF WOOD

II. ACTIVITY FORMAT:

A. Tools and Materials

Hand file or awl
Hand drill
Electric drill
Hammer
12 board feet 3/4 x 4"
Saws
Wooden horse
Sandpaper

B. Human Aides and Resources

Father who's a carpenter
Parent aides during activity

C. Procedures for this activity (with helpful hints)

1. Assemble children in small groups around activity centers. Provide paper activities until each group can cut 1' length off long boards.
2. Have children mark one surface into three sections.
3. In left section, allow children to use various tools other than drills to attempt to make a hole.
4. In middle section, have children use a hand drill.
5. In right section, supervise children as they make a hole using electric drill.
6. Evaluate effectiveness of three methods.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children had a real appreciation for amount of work that tools save the person doing the work.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SCREWS

II. ACTIVITY FORMAT:

A. Tools and Materials

Scissors
Pencils
Crayons
Paper
Screw drivers
Screws
Wood

B. Procedures for this activity (with helpful hints)

Screws (show how screw is an inclined plane)

1. Cut a piece of paper in triangular shape.
2. With a crayon, color the slanting edge.
3. Wind the paper around the pencil.
4. The colored edge should show the rivets of a screw.
5. Try using a screw driver and screws on scrap paper.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: MICHIGAN

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The purpose of this unit is: a) to calculate distances between cities; b) to learn the history of Michigan, the important people from Michigan, what Michigan offers the world in economics and industry.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Films: History in Motion
When Michigan Was Young

Filmstrips:
Manufacturing Today in Michigan
Natural Resources of Michigan

2. Field Trips:

Greenfield Village

3. Human Resources:

State Highway Department

4. Activities:

Making Michigan Relief Map
Vehicle Models
Make Cherry Tarts

UNIT TITLE: MICHIGAN

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math Calculate distances Graph Measurement	Calculate the distance between cities
Science Climate Temperature	Plot a graph showing temperature, rainfall Describe geographical features of State
Social Studies History of Michigan Economics and Industries	List at least 5 unique features of Michigan Describe at least 10 important cities in Michigan List at least 4 important historical events in Michigan

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Measuring for relief map	
Plotting and graphing daily and monthly showing of rainfall Discuss differences in climate and temperature in Upper Peninsula and Lower Peninsula	
Make a book report on cereal factory Write a book report on Charles Lindberg or any other important person in Michigan	

UNIT TITLE: MICHIGAN (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art Coloring Mural Drawing	Make mural on Michigan
Language Art Writing Reading Reporting	Gather data on tourist attractions in Michigan
Careers Services provides distributing Managing controlling Producing raw materials processing	Recall at least 5 services provided by State Identify at least 10 major occupations in Michigan Identify 5 raw materials and how they are used to produce products in Michigan

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make travel posters promoting trips to Michigan Make collage on Michigan products	
Write reports Write stories and poems about Michigan Write letters to State Department of Commerce Make booklet called "Our Michigan"	
Role play major occupations in Michigan Play "What's My Line" as on TV show (use occupations of Michigan people)	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

VEHICLE MODELS (Putting Together)

II. ACTIVITY FORMAT:

A. Tools and Materials

Several various models
EX. plane, car, truck, boat, etc.
Model glue
Newspaper

B. Human Aides and Resources

College boys or fathers to help read directions

C. Procedures for this activity (with helpful hints)

1. Group children to work on models - keep each group small so each child gets chance to participate.
2. You should have lots of help or have pre-read all instructions so you can help when necessary.
3. Make sure desk or table tops are covered so glue doesn't ruin them.
4. Have plenty of glue.
5. Turn the kids loose to put models together.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKING MICHIGAN RELIEF MAP

II. ACTIVITY FORMAT:

A. Tools and Materials

Sawdust
Wheat paste
Board for base
Paint

B. Procedures for this activity (with helpful hints)

1. Mix 1/2 sawdust and 1/2 wheat paste.
2. Shape sawdust into Michigan map and form elevation, lakes and rivers.
3. Paint.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAKINC CHERRY TARTS (for 60 children)

II. ACTIVITY FORMAT:

A. Tools and Materials

2 cans cherry pie filling (1 can makes 20 tarts)
1 can apple pie filling
6 cans biscuits (10 to a can)
Flour

B. Procedures for this activity

1. Roll out each biscuit on floured plastic.
2. Put in 4 cherries or 4 apple slices.
3. Fold over and pinch together.
4. Have each child place his tart in tiny aluminum pan with name on bottom.
5. Bake in 425 degree oven for ten minutes.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT PLANSHEET

TITLE: PREHISTORIC MAN

GRADE LEVEL: 3-4

GENERAL OVERVIEW: Man is a social animal. This unit is designed to turn back the calendar to show man's beginnings.

TEACHING/LEARNING RESOURCES:

1. **Reference Materials:**

Books:
Fire Hunter by Jim Kjelgaard
How and Why Wonder Book of Caves to Skyscrapers

Films:
Ancient Egyptian (27 min)
Ancient Mesopotamia (11 min)
Ancient World Inheritance (11 min)
Cave Dwellers of the Old Stone Age (18 min)

Filmstrips:
Houses of Long Ago
New Stone Age
Old Stone Age
River Cultures: Mesopotamia

Maps: Old Worlds

2. **Field Trips:**

Ann Arbor - Museum of Natural History
Archaeology Museum
Detroit Art Institute

3. **Human Resources:**

Teachers
Speech development
Speech therapist

4. **Activities:**

Gathering roots, grubs
Hunting small game
Spear fishing
Making tools
Building shelters

UNIT TITLE: PREHISTORIC MAN

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies Tribes Locations of digs and their ramifications on movement Typical prehistoric day, religion and natural phenomena, family units, tribes, communication, movement, leaderships, government TERMS: digs, anthropology, survival prehistoric, archaeology, ice age, geology	Recall in role playing a typical day in the life of a prehistoric man Predict the religious characteristics of the people based on scientific phenomena Discover methods of prehistoric communication Prepare tools similar to those used by a caveman List reasons for a tribe moving from area to area Explain how leaderships was developed among families and tribes
Math Tallying Measurement	Tell the time eras of ancient primitives (i.e. stone age, ice age) and give simple descriptions of each List major discoveries of primitives (i.e. fire, tools, weapons, farming)
Science Fire, the elements (rain, snow) and shelter	Indicate on a map where primitive remains have been found Name the continents Make a picture of a land bridge and describe how man may have used these in his migrations Plot a map on graph paper to scale

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
View - Movies Filmstrips Teacher read Fire Hunter	
Field trips to Ann Arbor Field trips to Detroit Art Institute	Parent drivers

UNIT TITLE: PREHISTORIC MAN (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art	
Construction	Measure objects in terms of hands, paces, and sticks with its relative accuracy Count objects by tallying Deduce, from first-hand experience the best method for measurement and counting List 10 ways we measure or use measurement
Language	
Development of early written language	List the uses of fire Scientifically define fire List the seasons and their characteristics State the problems and assets that the weather provides Deduce why man could not build more sophisticated forms of shelter Make with the student's committee a prehistoric display containing 2 tools, 1 weapon and 1 form of shelter
Careers	
Job functions of prehistoric man	Identify the job roles of gatherers, hunters, food preparers, warriors, builders, leaders
Production	Make prehistoric products
Management of a prehistoric community (tribe)	Identify the planning, organizing and controlling management functions of a prehistoric tribe

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make pictures of possible early language Make a picture calendar of early occurrences	Encyclopedia
Report to the class Speech therapist - early speech development Display construction of early shelters, tools and weapons	Paste sticks Sawdust mache Green twigs
Role playing gather roots, grubs hunting small game spear fishing making tools building shelters	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

SHELTER CONSTRUCTION

II. ACTIVITY FORMAT:

A. Tools and Materials

Papier mache
Sticks
Stones
Dirt
Glue
Cardboard
Chicken wire
Clay
Grass
String

B. Procedures for this activity (with helpful hints)

Using the materials listed, the children can construct the various kinds of structures used by primitive man including caves, lean-tos, pit homes, huts, and sod homes. A single large structure could be constructed and later used for cave drawings and role playing. Refrigerator boxes are great.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TOOL MAKING

II. ACTIVITY FORMAT:

A. Tools and Materials

- Rocks
- String or twine
- Clay
- Heavy sticks
- Basket weaving materials

B. Procedures for this activity (with helpful hints)

After a discussion of primitive tools, make some.

- Bowls
- Hammers
- Spears
- Spoons
- Baskets

HANDS ON ACTIVITY (STUDENT PERFORMED)

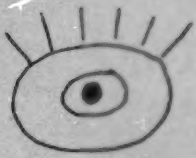
I. NAME OF ACTIVITY

COMMUNICATION

II. ACTIVITY FORMAT:

Give the children an opportunity to draw the things that would be found in a prehistoric environment.

Demonstrate how man can communicate only by drawings or pictures (i.e. modern)



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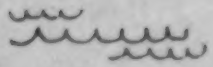

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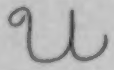

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HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

AN ANCIENT CALENDAR

II. ACTIVITY FORMAT:

A. Tools and Materials

Paper
Writing Materials

B. Procedures for this activity (with helpful hints)

Make a time-line chart showing the various periods of prehistoric history and the flora and fauna of those periods. Man's development can also be traced on the chart.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: PLANTS AND TREES

GRADE LEVEL: 3-4

GENERAL OVERVIEW: Children are curious about nature and their surroundings. Through the study of Plants and Trees children will observe their structures and functions. The children will become better aware of the dependence that people and animals have upon plants.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
The Blue Seed
A Tree Called Moses

Films:
Classifying Plants and Animals
Color of Life, The
Genetics: Mendel's Law
Let's Watch Plants Grow
Life In A Pond
Life on the Tundra
Living Things In a Drop of Water
Movements of Plants
Plant-Animal Communities: Interrelationships
Plant-Animal Communities: Physical Environment
Plant-Animal Communities: The Changing Balance of Nature
Plant Tropisms and Other Movements
Plants that Grow From Leaves, Stems and Roots
Plants that Have No Flowers or Seeds
Seed Dispersal
Simple Plants: Algae and Fungi
Simple Plants: Bacteria
Succession - From Sand Dune to Forest
Temperate Deciduous Forest, The
Worth How Many Words

Filmstrips:
Parts of a Flowering Plant
Parts of a Plant
Photosynthesis
Plant Cells
Plant Experiments
Plant Factories
Plants (R)

Filmstrips: (continued)
Plants and Their Seeds
Plants and Water
Plants Grow
Plants Grow and Change
Plants We Use
Primeval Forests
Roots, Stems, Leaves
Seeds and Seed Travels
Story of Fruits and Vegetables
Story of How Apples Grow
Telling Trees Apart
Trees (R)
Using Forests Wisely
Vegetables
Walk In The Woods
What Is A Plant
Wilderness Nature Trail
World of Living Things
Adaptations of Plants
Animal and Plant Relations
Animals and Plants of the City
Animals and Plants of the Fields
Animals and Plants of the Forest
Animals and Plants of the Pond
Animals, Plants and Their Environment
Characteristics of Plants
Classification of Plants
Classroom Projects with Plants
Dependent Plants
Desert Flowers (R)
Desert Life Community
Desert Textures (R)
Finding Out How Plants Grow
Flowers, Fruits and Seeds
Forests
Forests: A Stable Community
From Flower to Seed
Fruits
Fungi
Germination and Plant Growth
Great American Desert
Green Plants Are Important to Us
Green Plants: Food Factories for the World
How Seeds are Scattered
Introducing Oceanography - Collecting Plants and Animals by Ship
Mushrooms
Nature's Half Acre
Non-green Plants

Filmloops:
Carpenters
Forestry Aids
Fire Fighters

Realia: Barley
Birch Bark
Cotton
Cotton bale
Lumber samples
Petrified wood
Rye
Wheat

Slides: Flowers
Plants
Vegetables
Weeds and Wayside Plants
Wildflowers

2. Field Trips:

Nature walk
Botannical Gardens - Belle Isle
Green House
SEOVEC
Lumber supply store
Building construction site
Floral shop

3. Human Resources:

SEOVEC students
Carpenter
Landscaper
Architect
Lumber retailer
Florist
Cook
Baker
Parent aids
Paper Company representative

4. Activities:

Artificial flowers
Leaf booklets - leaf prints
Yo-yo's
Handy Dandy Jar holders
Plant propagation
Dried Flower Arrangements
Cornhusk Dolls
Planter boxes
Fermentation of yeast
Collecting -seeds, leaves, flowers
Experimentation with compressed peat
Seed pictures
Leaf and needle collection
Growing mold
Examine details of leaves, stems and flowers
Herb garden

UNIT TITLE: PLANTS AND TREES

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science Categorize plants Plant products and uses Plant growth Photosynthesis	Distinguish between green and non-green plants Discover methods of categorizing plants Identify leaves & needles of various species List products made from plants Demonstrate how plant parts are refined and made into materials which are used in baking Identify the variables needed for a plant to grow Investigate ways from which plants get their start Identify the variables for a plant to make its own food
Social Studies Environment Conservation Affect on man Map skills	Predict outcome of growth of plants under certain environmental conditions Recognize conservation problems List beneficial and harmful plants to man Locate lumber producing states on a map

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Experiments and Activities involving plants Research	
Group discussion and research	

UNIT TITLE: PLANTS AND TREES (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math	
Time	Compute hours of man hours involved in activities
Measurement	Measure by the inch for correct spacing of plants
Numerical sequence	Number pages in a book properly
Cost	Compute cost of growing plants
Language Arts	
Research and writing skills	Gather data on plant types
Creative writing	Write creative stories Write job descriptions
Careers	
People and their job roles -	
Tools	List tools necessary for occupations connected with plants
Management	Managing a small business - florist shop
Production	Produce artificial flowers Grow plants started from stems, bulbs, seeds and roots
Service	List 7 service occupations related to plants and trees

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Small business activity	
Creative writing - leaf booklets Planting activities Research Guest speakers	
Guest speakers and research Field trips and small business activity Plant and flower activities	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

LEAF BOOKLETS

II. ACTIVITY FORMAT:

A. Tools and Materials

- Leaves
- Rulers
- Scissors
- Wax paper
- Iron
- Scotch tape
- Pen
- Glue
- Pencil
- Construction paper
- Paper punch
- Paper fasteners
- Tagboard/cardboard
- Material

B. Procedures for this activity (with helpful hints)

PAGES

1. Collect leaves
2. Put leaves between waxed paper and iron until wax melts onto leaves (If wax hardens too fast, place iron on it again to warm it).
3. Mount leaves on construction paper with scotch tape.
4. Identify each leaf according to a. Name, b. family, c. uses.

BOOK COVER

1. Cut cardboard 9 x 12.
2. Cut material 11 x 14 (enough for good overlap).
3. Cover cardboard with material. Glue overlap of material to cardboard. (Trim excess in each corner to prevent bulk)
4. Place a sheet of construction paper on inside of cover to finish it off.
5. Punch holes.
6. Assemble pages.
7. Fasten with paper fasteners.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTING YO-YO'S FROM WOOD

II. ACTIVITY FORMAT:

A. Tools and Materials

Wood/dowel rods
Drills
Paint
Shellac
Saws
Brushes
Sandpaper
Rulers
Glue
String

B. Human Aides and Resources

Designer, carpenter
College students

C. Procedures for this activity (with helpful hints)

PLAN the jobs well in advance.

1. Make and trace patterns onto wood.
2. Cut out circles.
3. Drill center holes.
4. File and sand.
5. Cut dowel rods for axle.
6. Paint
7. Shellac
8. Assemble
9. String

It takes a long time to file and sand the yo-yo's. Electric sanders shorten the work. Make sure the dowel rods are thick enough or they will break easily. Making the yo-yo's (one for each child) takes a good month.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

HANDY DANDY JAR HOLDERS

II. ACTIVITY FORMAT:

A. Tools and Materials

Baby food jars
Wooden board 15" long
Nails
Varnish
Hammer

B. Human Aides and Resources

Parents
Students

C. Procedures for this activity (with helpful hints)

1. Varnish the piece of wood. Allow it to dry.
2. Wash the jars and their caps thoroughly and dry. Arrange the caps on a piece of wood. Make sure the top side of each cap is against the wood. Nail the caps to the wood. Now screw the jars onto the caps.
3. This is a fine holder that can be fastened under the shelf above his work bench. The screw on jars are great for storing nails and other small items.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PLANTING HERB OR SPICE GARDEN

II. ACTIVITY FORMAT:

A. Tools and Materials

Half-gallon milk cartons
Seeds, slips, or bulbs
Potting soil and fertilizer
Plastic bowl and spoon
Labels

B. Human Aides and Resources

One parent to assist during project - Management!
Mothers sending in cartons and seeds, bulbs
Local herb club

C. Procedures for this activity (with helpful hints)

Set up assembly line:

1. Cut cartons in half.
2. Mix soil and water in bowl.
3. Put soil in half cartons.
4. Plant seeds, slips, or bulbs.
5. Label each carton and store.
6. Keep chart on observable growth.
7. Harvest and store as time demands.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PLANT PROPAGATION

II. ACTIVITY FORMAT:

A. Tools and Materials

- Grass seed
- Bird seed
- Beans
- Dry onion
- Sweet potato
- Dirt - containers
- Cuttings from plants
- Bulbs

B. Procedures for this activity (with helpful hints)

1. Plant duplicates.
2. Water one group and place in light.
3. Use the others to do experiments with heat, light and water.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

TREE PLANTER

II. ACTIVITY FORMAT:

A. Tools and Materials

- Wood
- Nails - finishing and headed
- Screws
- Varnish and brushes
- Saber saw
- Vises
- Wood chisels
- Plastic
- Sandpaper
- Hammer
- Saws
- Brace and bit
- Drill
- Screwdrivers

B. Procedures for this activity (with helpful hints)

1. Measure 3 sides and 2 ends (3/4")
   sides 2 - 5 1/2" by 3 1/2"
   1 - 5 1/2" by 10"
   ends 2 - 3 1/2" by 8 1/2"
2. Saw
3. Sand
4. Join with nails and screws (see attached sheets)
5. Paint and varnish
6. Line with plastic
7. Fill with dirt
8. Plant tree seeds

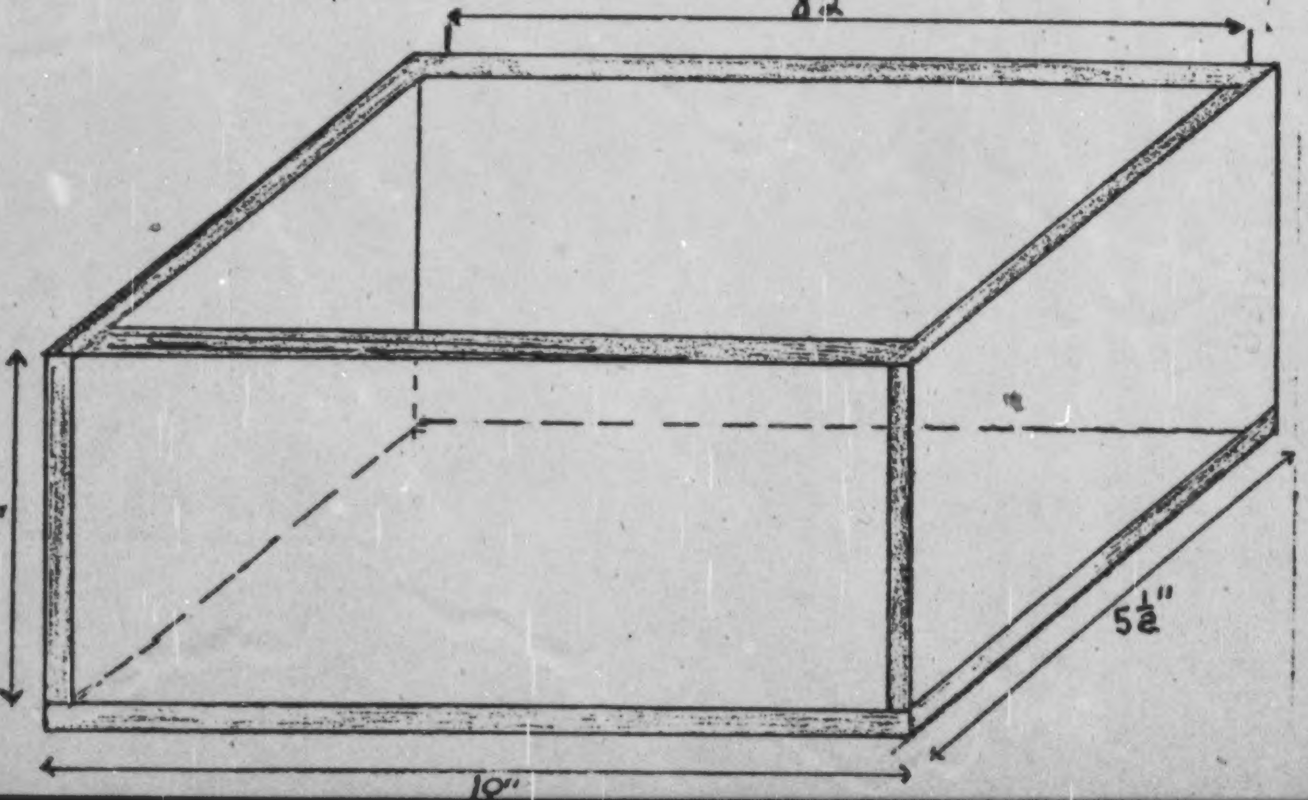
Side 1

Tree Planter - Project L.E.T.

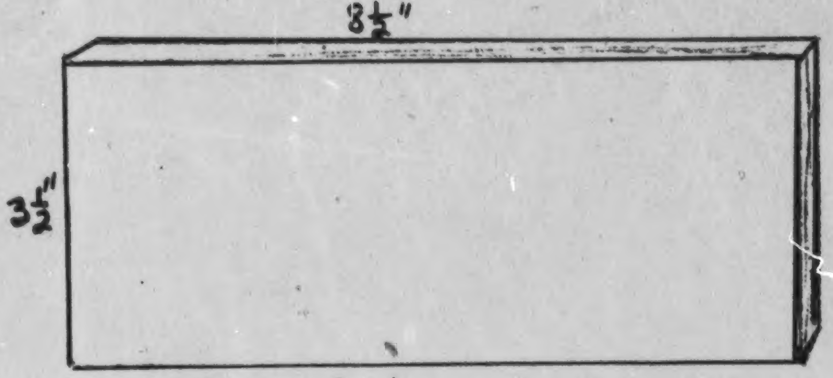
Cut

2 5½" by 3½" by ¾" } from 5½" stock
1 5½" by 10" by ¾" }

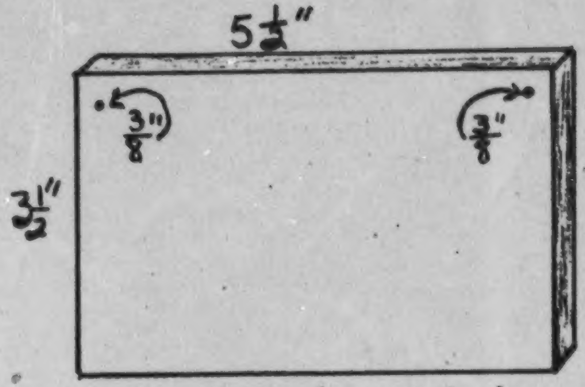
2 3½" x 8½" x ¾" from 3½" stock



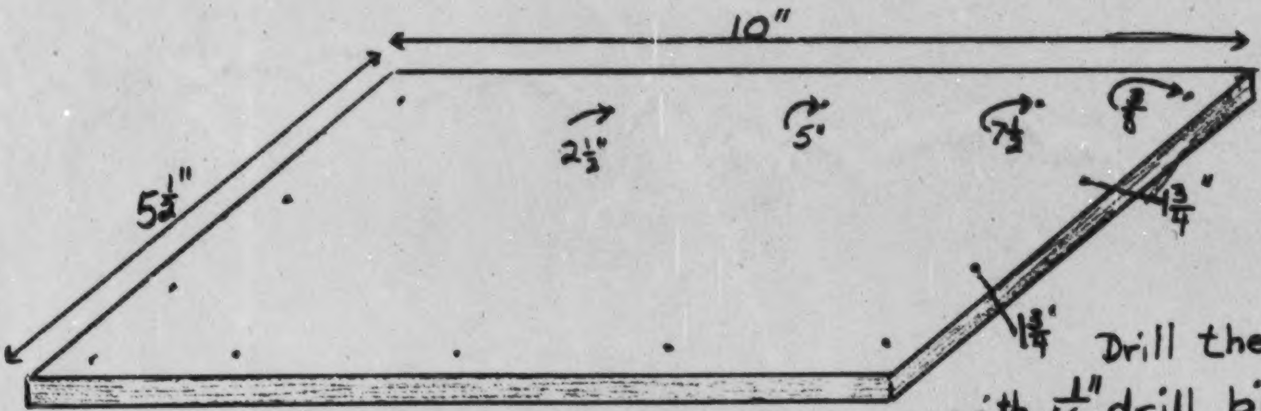
Side 2



Sides
(no holes)



Ends - 2 holes


10"
5½"
2½"
5"
7½"
3/8
1¾"
1¾"

Bottom

3/8" in lines for nail holes

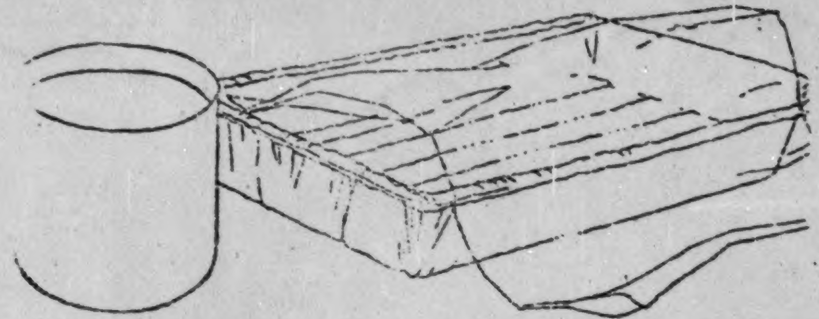
Drill the 14 holes with 1/16" drill bit.

PLANTING INSTRUCTIONS

opagating blocks in this package are made from specially treated wood pulp, whi se, comes from trees. The chemical properties of these blocks are similar to the n a good soil, and they have been built into the block through the efforts of biologis mists and engineers. Enough nutrients are incorporated to supply a young plant month.

seeds in the envelope are black locust which is a native Michigan tree, renowned able wood. It is also a legume, and will therefore add nitrogen to the soil.

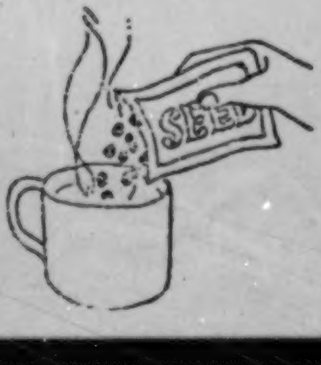
MATERIALS NEEDED:



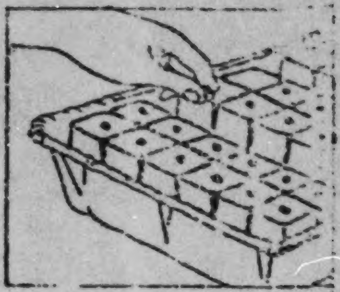
1. *A cup in which to soak seeds.*
2. *A pan or pans for the synthetic soil blocks. A disposable aluminum broiling pan with a corrugated bottom is excellent or an empty aquarium could be used.*
3. *A sheet of plastic film. A large "Baggie" will just fit over some of the aluminum broiler pans.*

TING PROCEDURE:

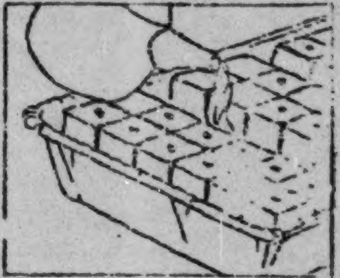
k seed in hot water. Get a cup of hot water to 200 degrees F) and dump contents of seed et. Do not apply additional heat, let water as seeds soak. Soak for four to six hours, n off water and plant.



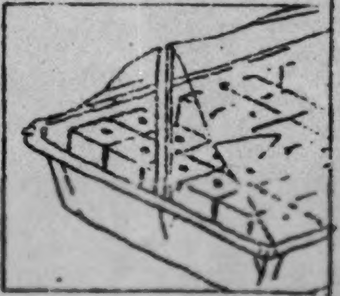
e synthetic soil blocks in pan and immediate- fter removing seed from water, place two ls in each hole. Make sure seeds fall to bot- of hole and do not cling on side. Do not plug or cover seed.



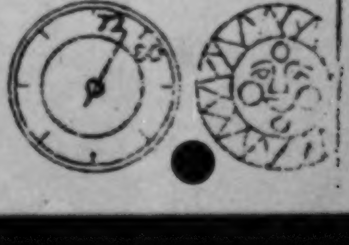
ly add lukewarm water to the pan. The dry ks will rapidly absorb water until they are ated. Once the saturation point is reached, only enough water to cover bottom of pan about 1/16" of water. If corrugated broiler are used, fill up the troughs until the water en with the ridges.



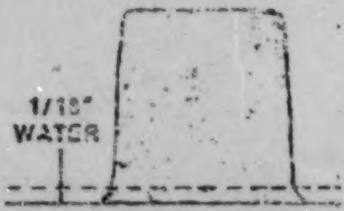
with plastic, preferably in tent-like fashion. ot close airtight, either leave ends open or punch about ten holes in plastic about the of a pencil. The purpose of the plastic is to t evaporation. Most schools and homes have mely low humidity when heating systems operation. This causes rapid water evapo- from the synthetic soil blocks which, in cools the blocks below the germination erature. On the other hand, extremely high dity is favorable to fungus (mold) growth, e the need for some air circulation.



pan in a room which has a daytime temper- of between 72 and 80 degrees, and prefer- in a south window where radiant heat from n is available. Do not place on or immedi- over a radiator.



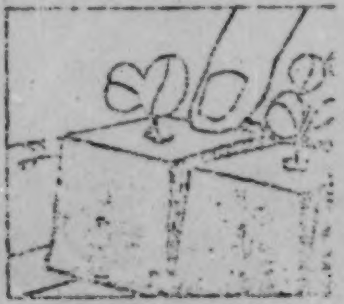
During the first two days, keep blocks saturated, but never more than 1/16" of free water on bottom of pan when finished watering. Too much water will cause seeds to rot.



7. After the second day, the bottom of the pan should be reasonably dry much of the time. Add water only often enough to keep blocks moist. The blocks are light brown when dry, but will appear uniformly and distinctly darker when saturated. If they appear slightly "mottled" (light and dark spots) they are in the correct range of dampness for plant growth. They should be fully saturated only for a few hours immediately after watering and never allowed to get completely dry. If a plastic cover is used, watering will be required only every four or five days. After the second day, there is probably more danger of overwatering than underwatering.

DO NOT OVERWATER

8. When seedlings emerge above the blocks, remove the plastic film. This should be in four to six days. Cut off one of the plants at block level if more than one plant emerges. If the relative humidity of the room is low, the block will feel cold to the touch due to evaporation. This evaporation and coolness can be reduced by replacing the plastic cover during the daylight hours and removing at night.



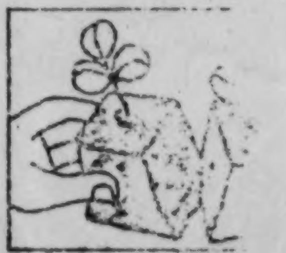
9. If your school has a Spring or Easter vacation, some arrangements will need to be made to take care of the [illegible] [illegible] watered [illegible]

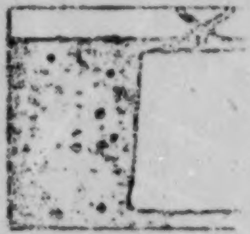
[illegible]

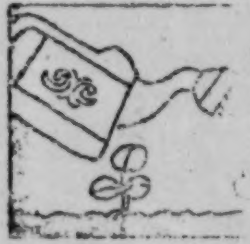
[illegible]

If transplanting is desired, follow these simple steps.

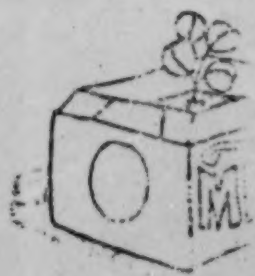
A. Add a little fine soil to fill the hole in the block.
B. Saturate BR-8 blocks completely.
C. Separate blocks gently by tearing away from the cake. Do not attempt to remove the BR-8 block from the root system of the plant.
D. Place the rooted block into the soil. The tree seedlings will do better in sandy loam than in heavy clay soils.
E. Fill in around the block with soil so that the block is covered.
F. Firm in by watering or lightly packing the soil around the block so as not to cause mechanical damage to the root system.
G. Water plants thoroughly.







the seedlings are to be taken home for transplanting, individual plants can be easily carried a clean 4 oz. milk carton with the top cut off.



[illegible] in the teacher's guide, not all seed will germinate even under [illegible] you can expect some blank blocks.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. **NAME OF ACTIVITY**

PLANTER BOXES

II. **ACTIVITY FORMAT:**

A. Tools and Materials

Hammer
Nails
Plastic liner
Dirt
Seeds
Hand Saws (cross cut, back, saber)
Wood (1/2" plywood)

B. Procedures for this activity (with helpful hints)

1. Measure and draw lines on wood (2 - 4" x 6", 2 - 4" x 4", and 1 - 6" x 4")
2. Cut wood
3. Nail sides to bottom
4. Nails sides to sides
5. Line boxes with plastic
6. Plant seeds

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ARTIFICIAL FLOWERS - ROSES

II. ACTIVITY FORMAT:

A. Tools and Materials

Wire cutters
Scissors
Pencil
Loaf of bread
Elmer's glue
Food coloring
Florist clay
Artificial green foliage
Halves of walnut shells

B. Procedures for this activity (with helpful hints)

A. Roses

1. Each person has 1/2 slice of white bread
2. Remove crust
3. Break bread into small pieces
4. Add 1 tablespoon Elmer's glue and small amount of food coloring
5. Knead until bread and glue workable clay
6. Place clay about size of a pea between wax paper
7. Roll with a pencil until clay is very thin
8. Uncover and cut in half - lengthwise
9. Roll one of the halves into tight scroll (this is center of rose)
10. Take remaining half and form into many tiny balls
11. Flatten each ball by pressing it with your thumb
12. Add each flattened piece as a petal around scrolled center
13. When rose is formed place piece of green wire for a stem
14. Allow to dry - overnight
15. Spray varnish when dry

B. Holder

1. Fill empty half of walnut shell with green floral clay

C. Arrangement

1. Place roses in clay container
2. Fill in with a few pieces of green plastic plant

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

ARTIFICIAL FLOWERS

II. ACTIVITY FORMAT:

A. Tools and Materials

Scissors	Kleenex
Wire cutters	Yarn
Shellac	Cloth
Egg cartons	Wire
Brushes	Green tape
Staplers	Pipe cleaners
Paint	

B. Procedures for this activity (with helpful hints)

A. Paper flowers -

1. Fold Kleenex or squares of tissue paper (toilet tissue great) into fan (Rt, left, rt. etc.). Use 4 layers.
2. Tie in center.
3. Pull up layers, by layer. Pull toward center.
4. Insert pipe cleaner for stem. Glue center together where open.

B. Cardboard flowers -

1. Cut out egg cups from egg cartons
2. Cut four petals from each cup
3. Tie yarn and staple in center
4. Insert wire or pipe cleaner for stem
5. Paint petals
6. Shellac

C. Cloth and wire flowers -

1. Variety scrap cloth cut into petal shapes
2. Take 6" piece thin wire, loop at top
3. Paste 2 petal cloth forms over wire to cover
4. Repeat these steps 3 more times to form 4 petals in all
5. Place all petals (4) on wires together
6. Insert curled pipe cleaner for center
7. Tape four wires together with green wire tape - forms 1 - 4 petal flower with stem
8. Bend petals into shape to form 3-D flower

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DRIED FLOWER ARRANGEMENTS

II. ACTIVITY FORMAT:

A. Tools and Materials

Gather weeds in field
Small vases
Spray paint
Styrofoam

B. Human Aides and Resources

Teacher

C. Procedures for this activity (with helpful hints)

If possible, have a florist come in to discuss flower arranging beforehand. If this isn't possible, demonstrate this yourself.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Children experienced difficulty in arranging flowers in an attractive manner.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CORNHUSK DOLLS

II. ACTIVITY FORMAT:

A. Tools and Materials

- Cornhusks
- Scissors
- String
- Paint

B. Human Resources

Teacher

C. Procedures for this activity (with helpful hints)

Discuss and show children various cornhusk dolls made by the American Indian.

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Experiencing the difficulties encountered in making the dolls.
Manipulation of cornhusks into a useful and attractive form.
Observing uses of plant materials.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT PLANSHEET

TITLE: ROYAL OAK

GRADE LEVEL: 3-4

GENERAL OVERVIEW: Children will best understand the organization or structure of city government when they focus on their own locality. This unit is designed to appeal to Royal Oak children.

TEACHING/LEARNING RESOURCES:

1. **Reference Materials:**

   Chamber of Commerce Book on Royal Oak
   History of Royal Oak

2. **Field Trips:**

   Field trip to City Hall and/or other buildings run by the City such as a fire station and the library, etc.

3. **Human Resources:**

   Speaker on History of Royal Oak
   Police Officers
   City Attorney
   Superintendent of Royal Oak Schools

4. **Activities:**

   Role playing:
   - Acting as various members of city commission
   - Acting out various roles of city court
   - Acting out role of policeman
   - Hands-on activities:
     - Making city model
     - Making jigsaw puzzle of Royal Oak map

UNIT TITLE: ROYAL OAK

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
History and geography of area	Describe boundaries of Royal Oak
	List four important events in the history of Royal Oak
	List five physical changes in the composition of the city in the past fifty years
	List five commercial businesses in Royal Oak
	List four cultural organizations in Royal Oak
	List important buildings in Royal Oak, e.g. Shrine, Zoo, Farmers' Market, Library
Language Arts	
Writing reports	Write five important places of employment in Royal Oak
Write letters	Write a letter to the Parks and Recreation Department requesting a map locating existing recreational facilities
Make booklet	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make dioramas of Royal Oak in past Have student do individual study and research on a large American city Select city symbols: (a) bird (b) tree (c) flower Make a city model Make puzzles from map of Royal Oak Have a mock court Set up a city commission	
Letter writing	

UNIT TITLE: ROYAL OAK (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math	
Measuring	Measure a city block
Drawing to scale	Measure perimeter of a city park and compute the area
	Make a time line of Royal Oak history
Careers	
Servicing	List five services provided by city
Managing a) planning b) organizing c) controlling	List five important places of employment in Royal Oak
Job locations a) interior b) exterior	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Make a time line of Royal Oak history Pictures of old Royal Oak 1818 first settler 1823 Hubbard settled in area Chase's Corner 1826 first store 1830 first post office 1850 first school 1891 Royal Oak became Village 1921 Royal Oak became a City Beaumont Hospital built in 1960's Our school built Graphs of population growth of Royal Oak 1940 - 25,000 1950 - 46,000 1960 - 80,000 1970 - 86,000	
Visit City Hall personnel department	

UNIT TITLE: ROYAL OAK (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art	
Combining	List flowers and plants indigenous to Royal Oak
Separating	Construct a unique City flag
Forming	

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Draw an imaginary City flag - have a class contest to select best or most appropriate flag Make a collage of flowers and plants indigenous to Royal Oak	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

JIGSAW PUZZLE OF ROYAL OAK

II. ACTIVITY FORMAT:

A. Tools and Materials

Piece of tempered masonite	Mod-podge
Royal Oak Map	Dremel Saw

B. Human Aides and Resources

It would be wise to have another adult to supervise the use of the dremel saw.

C. Procedures for this activity (with helpful hints)

Use Mod-podge and put map of Royal Oak on masonite, be sure that the surface is evenly glued and smoothed. Allow several days for drying. On the back of the masonite draw intersecting wavy lines - it is wisest to keep the lines fairly simple since it is difficult for the children to saw intricate lines.

NOTE: Maps of Royal Oak are available from the City Hall or School District, City of Royal Oak.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: TRANSPORTATION - AIR TRANSPORTATION - (AVIATION)

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The purpose of this unit is to help the children realize the affects of air transportation on our society and the importance of the airplane as an invention of the twentieth century.

TEACHING/LEARNING RESOURCES:

1. **Reference Materials:**

Books:
Airplanes by Louis Henderson
Airplane Book by William Pryor
Airport by Paul Witty
A Trip on a Plane by Carla Greene
At the Airport by Lillian Colonius
Helpful Helicopters by Dorothy Allison
How Airplanes Are Made by David Clock
How to Make and Fly Paper Airplanes by Captain Ralph A. Barnaby
Joe's Story of the Airport by Marie Smith
I Want to be a Pilot by Carla Greene
Model Airplanes for Beginners by H. H. Gilmore
On the Airways by Josephine Phillip
The Airplane at the Airport by Morris Stuart
The First Book of Airplanes by Jeanne Bendick
The First Flying Book by Campbell Talhan
The Story Book of Aircraft by Maud Petersham
The True Book of Airports and Airplanes by John Bryan Lewellen
The True Book of Weather Experiments by Illa Podendorf
What Does A Jet Pilot Do? by Robert Wells
Wonderful Plane Ride by Ruth Weir
Open Highways - Grade 4 - Publisher, Scotts, Foresman
  Wright Brothers
Open Highways - pp. 140-147
  a) Airplane trip by Jet
  b) Airport in the Jet Age
  c) Maps for a Changing World
  d) Jet Pilot
  e) Principles of Flight

Filmstrips:

- What Make An Airplane Fly
- Science at the Airport
- How Do Jets Fly
- Airplanes
- How Do Helicopters Fly
- What Makes an Airplane Fly
- Air Systems (with cord)
- Air Transportation
- Weather Instruments

Filmloops:

- Stewardess
- Cooks and Chefs
- Airplane Mechanics

Realia:
- Airline maps showing flying routes
- Airplanes - paper, plastic, and wooden
- Weather instruments
- Pictures of planes secured from different airlines
- Air schedules
- Weather and air charts

2. __Field Trips__:

- Metropolitan Airport (tour)
- Oakland Airport
- Pontiac Airport

3. __Human Resources__:

- College students
- Parents
- Tour Guide
- Security Official
- Commercial Pilot
- Stewardess
- 747 Chef - Metro Airport

4. __Activities__:

- Role playing
  1) simulated flight take off - landing
  2) simulated flight to Chicago
- Make gliders
- Weather instruments
  1) wind sock
  2) weather vane
- Construct paper airplanes
- Construct and design a model plane
- Construct gliders
- Make an Air Force or Airplane Museum
- Prepare food - Flight

UNIT TITLE: TRANSPORTATION - AIR TRANSPORTATION - (AVIATION)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child wll be able to:
Social Studies Maps: locations directions charting flights Aircraft transportation	Discriminate directions on map Differentiate continents and oceans Justify different uses for air transportation List Ecology problems associated with airports Describe the history and development of aviation Recognize and cite evidence for the growth, changes and the improvements in aviation Compare and contrast different kinds of air transportation
Science Principles involved in flight-use of air to life and moving things Use of weather instruments in air transportation Computed flying time and miles per hour Wind direction - air pressure Affects of weather conditions on flying Aerodynamics Weather instruments	Explain how air moves and lifts things Identify use of air instruments as an aid to air transportation List effects of air transportation on environment Construct an airplane which would be balanced when hanging from a string Construct wind vane, wind sock, or anemometer

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
1. Brainstorming	
2. Simulate a "take off" and "landing"	
3. Simulate a flight to Chicago	
4. Make an air force or airplane museum	
5. Discuss famous flights	
6. Discuss famous planes	
7. Read stories and poems on flight	
8. Construct paper airplanes	
9. Experiment planes and weather instruments	
10. Fly paper airplanes	
11. Discuss results	
12. Construct gliders - Balsa	
13. Construct weather instruments used at airport	
14. Discuss films and filmstrips	
15. Choral reading of poems and plays	
16. Prepare menu and food for flight - role playing	
17. Practice reading air schedules	
18. Make up schedule for trip	

UNIT TITLE: AIR TRANSPORTATION - AVIATION (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
Math Telling time Linear measurements Counting money Scheduling (flights) Cost of flight change Mileage tables Measuring and balancing Coordinate geometry	As a result of this unit, each child will be able to: Use a ruler Count out money for plane ticket Tell length of duration of imaginary plane trip Schedule a flight to own destination/ compute amount of time in flight Relate mechanics of flight Compare and contrast the different types of plane Gather data pertaining to a specific model plane Use measurement for construction activities; all math processes for computing costs
Language Arts Letter writing Choral reading Story writing Role playing Reading time tables Informational essay Library research to gain information Relating reading activities (reader workbook) Research skills	Write stories - Ex. "If I were a pilot, stewardess, etc." Write thank-you letters Read a time schedule and mileage chart Gather information on plane Write a report (old planes)

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
19. Collect, study, show, discuss insignia of airlines around the world 20. Recite a trip by air 21. Obtain information by letter from airlines 22. Take imaginary trip as a class 23. Write stories of air disaster or high jacking 24. Interview people holding jobs related to air transportation: Weather man - meterologist Air traffic controller Mechanic Pilot Navigator Stewardess Chef Truck driver Luggage man Customs agent Hotel workers (maid, desk clerk) Restauranteur Waitresses Insurance salesman Janitors Ticket stamper or collector Vendor machine man Reservation clerks Policeman Barber 25. Role play in simulated flight all related job 26. Field trips to airport	

UNIT TITLE: **AIR TRANSPORTATION - AVIATION (continued)**

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Art	
Proportion	Will make a puppet
Space relationship	Will make scenery for puppet show
Career Concepts	
Managing of people and things Servicing on plane a) pilot b) co-pilot c) flight engineer d) steward-stewardess Servicing on ground a) air traffic/controller b) weatherman c) reservation clerk d) ticket agent Production	List jobs available in area of air transportation List occupations involved in the operation of an airport Identify the interdependence of jobs involved in the service occupations (i.e. pilots, co-pilots, steward, stewardess, porter, ticket agent, advertising agent, food handlers, ground crew, chief, etc.) Identify characteristics of jobs (training) Identify service industries: good producing industry Compare jobs related to planes

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTING GLIDER

II. ACTIVITY FORMAT:

A. Tools and Materials

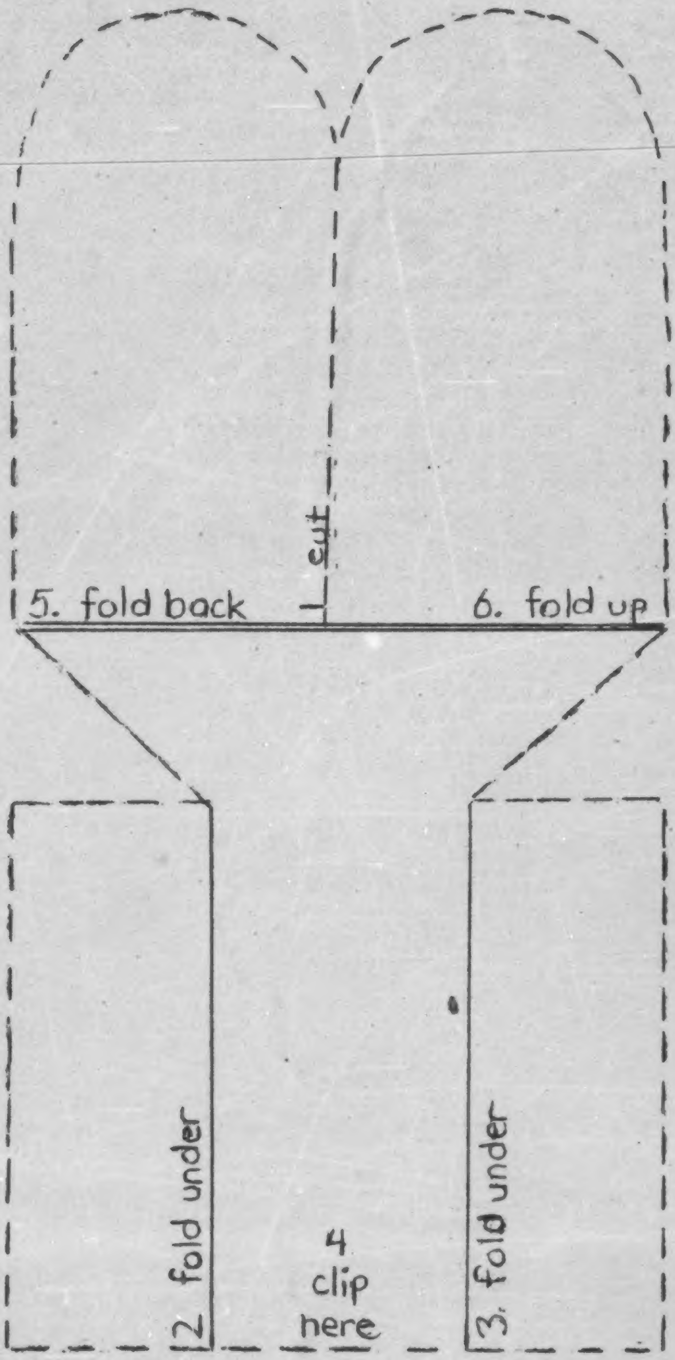
Scissors
Paper clips

B. Resources

Rolling Along Duplicating Masters by
Scott Foresman

C. Procedures for this activity (with helpful hints)

1. Mimeograph helicopter for children (see next sheet)
2. Cut out helicopter and clip
3. Stand on desk and drop helicopter


5. fold back
cut
6. fold up
2 fold under
4 clip here
3. fold under

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTING PAPER AIRPLANES

II. ACTIVITY FORMAT:

A. Tools and Materials

Scissors
Stapler
Duplicating paper

B. Resources

How to Make and Fly Paper Airplanes by
Ralph S. Barnaby

C. Procedures for this activity (with helpful hints)

1. Fold and staple
2. Experiment by making blunt rather than pointed nose to illustrate air resistance
3. Discuss lift and thrust
4. Have contest to determine which homemade plane stays in flight longer

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTING WEATHER VANE

II. ACTIVITY FORMAT:

A. Tools and Materials

Tagboard
Large wooden spools
Plastic straws
Scissors
Pins or Nails

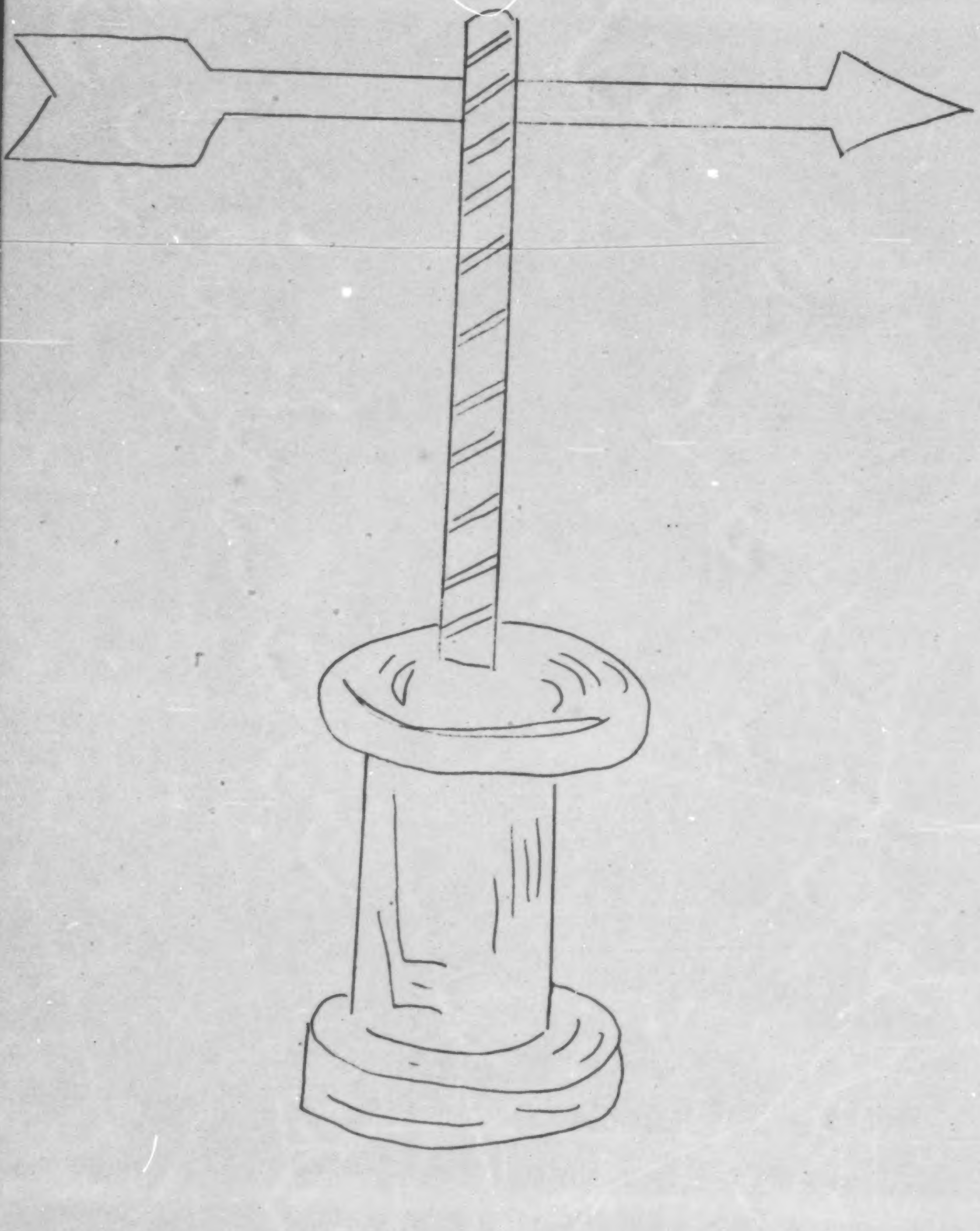
B. Resources

Weather Experiments by Illa Podendorf

C. Procedures for this activity

1. But along pin up through a large spool preferably wood (If spool is too light or small, pound nail through small piece of plywood and set spool over nail).
2. Set plastic straw on the pin (or nail) so it can turn freely.
3. Slit plastic straw at top. Glue arrow made from tagboard on the straw.

WEATHER VANE



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTION OF WIND SOCK* (pp. 63 and 64 LET Guide Anemometer - Wind Vane)

II. ACTIVITY FORMAT:

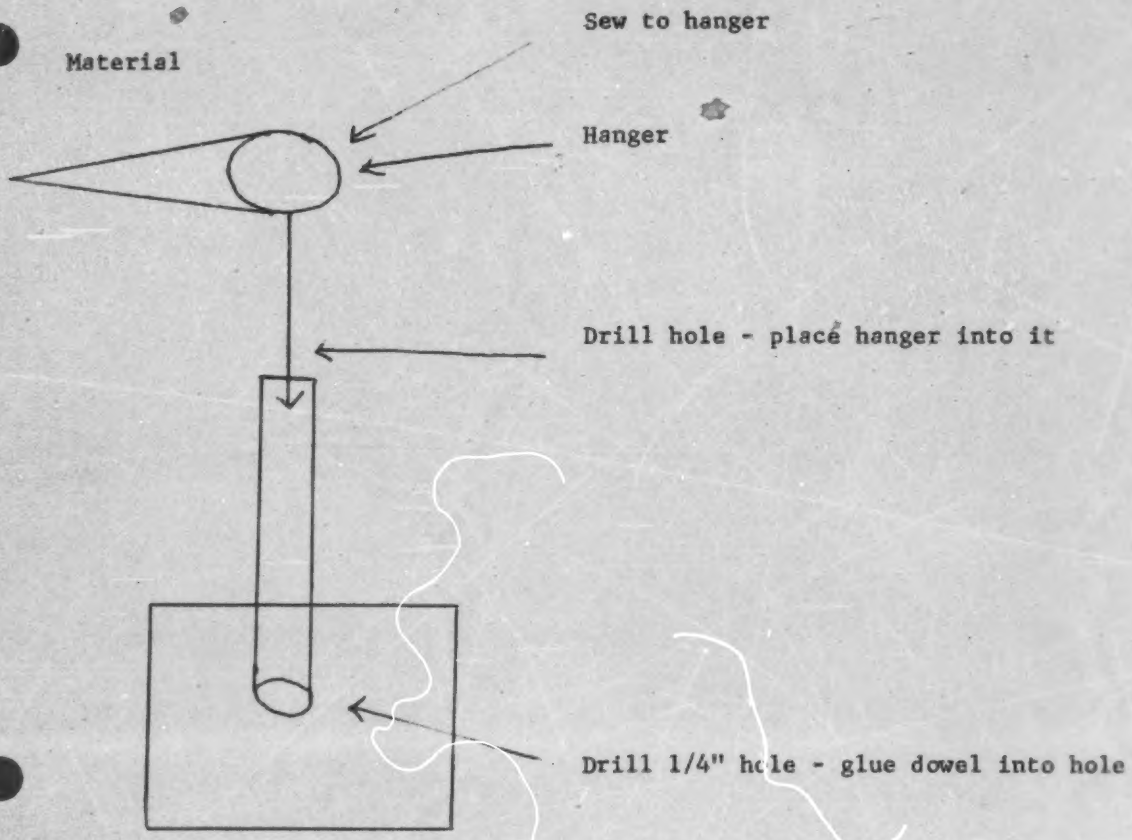
A. Tools and Materials

Plywood 1/" x 12" x 12"
Coat hanger
Tool panel
1 yard cotton material
1" nails
1/" doweling

B. Human Resources

Parents
Teacher aide

C. Procedures for this activity


Material
Sew to hanger
Hanger
Drill hole - place hanger into it
Drill 1/4" hole - glue dowel into hole

ROLE PLAYING ACTIVITY

SIMULATED FLIGHT TO CHICAGO

1. Have all student choose a role of either crew, passenger, food handler, or other necessary job.

2. Divide into committees to plan and execute details, props, etc.

3. Have pilot and co-pilot draw and design a paper copy of dash and regular dials of plane.

4. Arrange chairs in airplane style - make some type of seat belts.

5. Write out and distribute tickets for passengers - use blank tickets if possible.

6. Have food handlers plan and prepare snack to be served on flight.

7. Provide appropriate sound effects through use of tape recorder.

8. Have stewardess serve snack on trays to passengers on flight.

9. Have pilots write a script to announce destination, weater conditions, mileage, etc., to passengers.

10. Have passengers make cardboard suitcases to carry on board

11. Films: a. Jet Pilot

    b. Airplane trip by Jet

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCT PAPER AIRPLANES TO LEARN BASICS OF FLIGHT, LIFT

II. ACTIVITY FORMAT:

A. Tools and Materials

Mimeograph paper
paper clips

B. Procedures for this activity (with helpful hints)

1. Show and fly teacher-made paper airplane.
2. Show importance of air resistance by letting two papers drop to the floor (one cone shaped, the other a plain, unfolded sheet of paper). Compare the rate of fall.
3. Discuss lift which is the upward force that air exerts on an object aloft.
4. Have students experiment with various folds and kinds of paper to determine which flies best, farthest, etc. (be sure to cut off tip of paper airplane for safety).
5. Have contest to determine which stays in flight longest or travels greatest distance.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCT GLIDERS

II. ACTIVITY FORMAT

A. Tools and Materials

Knife or coping saw to shape balsa wood
Balsa wood
Rubber bands
Glue

B. Human Aides and Resources

Model Airplanes for Beginners by H. H. Gilmore

C. Procedures for this activity(with helpful hints)

1. Show a commercially bought, inexpensive kit for making a glider out of balsa.
2. Encourage creativity in style and shape of glider's wings, tail.
3. Have each individual construct a glider.
4. Take outside for contest of longest in air, greatest distance.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

INSIGNIAS OF AIRLINES

II. ACTIVITY FORMAT:

A. Tools and Materials

Tool rack
Wood in size of plaques

C. Procedures for this activity (with helpful hints)

1. Show, study, collect, and discuss insignia of all world's airlines.
   - Discuss reason for insignia
   - Discuss importance of line, design and colors
2. Discuss variety of airlines and how routes of airlines are determined.
3. On paper and pencil design insignia for your own imaginary airline corporation.
4. Cut, shape, and paint insignia on wooden pieces.
5. Display plaques of insignias.
6. If children would prefer not to work with wood, they could embroider these insignias on felt with yarn to form a sleeve patch.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT PLANSHEET

TITLE:	AUTOMOBILE TRANSPORTATION
GRADE LEVEL:	3-4
GENERAL OVERVIEW:	Children need to realize the affects of automobile transportation on our society.

TEACHING/LEARNING RESOURCES:

1. Field Trips:

   Ford Motor Company, Rouge Plant

2. Activities:

   Carved model cars from soap
   Assembly car production

UNIT TITLE: AUTOMOBILE TRANSPORTATION

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
History	List a history of cars in the United States and identify their inventors
Affect of cars	Analyze the affects of cars on our society
Science Machines	Recognize different forms of engines and fuels used in cars
Math Measurement	Measure distance on an odometer

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Group discussion and research	
Research	
Compute mileage in story problems and in automobile ride	

UNIT TITLE: AUTOMOBILE TRANSPORTATION (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Writing	Write reports and thank you notes
Reporting	
Careers	
Production	Describe automobile assembly production
Servicing	List several ways automobile industry is a service to mane and man's occupations

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Research and write reports about historical cars	
Automobile mass production activity Field trip to assembly plant Group discussion	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CARVE SOAP MODELS

II. ACTIVITY FORMAT:

A. Tools and Materials

Ivory soap
Table knife

B. Procedures for this activity (with helpful hints)

Design a car on paper
Carve it out of soap

III. RESULTS OF THIS ACTIVITY (AFTER IMPLEMENTATION)

Difficult for third graders.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

AUTOMOBILE MASS PRODUCTION

II. ACTIVITY FORMAT:

A. Tools and Materials

Parts List Per Car (Multiply number of parts of length of wood to determine total material needed per class.)

4 Wheels
*2 Coathanger wire, 4 1/2"
4 1/2" staples
*1 Pine, 3/4" x 1 1/2" x 8"
*1 Pine, 3/4" x 1 1/2" x 8"
4 Brads, 1"
4 1/8" I.D. - 3/8" O.D. Steel Washers

*Denotes pieces

B. Procedures for this activity

1. Cut 3 1/2" wide floor board to 8" length
2. Mark axle lines 1" from end of floorboard
3. Cut 3/4" x 1 1/2" blocks to 3 1/2" lengths
4. Nail hood to base (2 nails)
5. Nail cab to base (from bottom)
6. Nail staples to the bottom of the floorboards
7. Sand front of truck
8. Sand sides of truck
9. Inspect
10. Attach wheels and axle to staples (use 2 washers)
11. Cut axles to 4 1/2" lengths
12. Attach one (1) wheel to axle
13. Inspect wheel alignment
14. Attach headlights
15. Final inspection

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: RAIL TRANSPORTATION

GRADE LEVEL: 3-4

GENERAL OVERVIEW: The purpose of this unit is to help the children realize the affects of rail transportation on our society.

TEACHING/LEARNING RESOURCES:

1. Field Trips:

   Train Ride

2. Human Resources:

   Parents
   Train Engineer

   Grand Trunk Western Railroad Co.
   700 Pershing
   Pontiac
   338-0082
   Commuter Information 542-1120
   11 Mile Rd. & Sherman Drive
   Royal Oak

   Chicago, Milwaukee, St. Paul and Pacific Railroad
   301 W. 4th
   Royal Oak
   399-5656

3. Activities:

   1. Make large freight train as a continuing mural with each small group doing a car.
   2. Grand Trunk Western.
   3. An actual trip from Royal Oak during school hours is not possible at present (First train - Royal Oak to Pontiac 5:30 p.m. Last train Royal Oak to Detroit 7:56 a.m.) All yard operations are in Pontiac and visitors are not welcome.

UNIT TITLE: RAIL TRANSPORTATION

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
History of trains	Discuss the reasons for the decrease in passenger use of trains
Importance of trains	
Science	
Kinds of engines and fuels used in trains past and present	Recognize that trains are run by different kinds of engines Match the type of fuel each kind of engine uses
Language Arts	
Written reports	Gather information for a written report about the history of U.S. trains
Oral reports	Gather information for an oral report
Letter writing	Write a "thank-you" note correctly

METHOD OF IMPLEMENTATION

RESOURCE PEOPLE & MATERIALS

(FOR THE ENTIRE UNIT)

Make reports of old trains for a bulletin board mural

From films and filmstrips:

Kinds - diesel
steam
electric

Fuels - wood
coal
diesel oil
electric - falling water
- coal
- diesel
- atomic

Make train car. Have children work in small groups (2-3) which select a different kind of train car from this list.

- Engine
- Box Car
- Gondola Car
- Tank Car
- Stock (animal) Car
- Hopper Car
- Refrigerator Car
- Flat Car
- Caboose

Brainstorm to get a list of train related jobs on chalkboard

Discuss differences between passenger and freight trains

Brainstorm train jobs which are alike and different on passenger and freight trains

UNIT TITLE: RAIL TRANSPORTATION (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Math Measurement Linear	Construct an individual train car measuring 2 ft. x 4 ft. which will be mounted as part of a complete train mural
Art Proportion and space relationships	Identify 6 job roles and activities related to rail transportation
Careers Jobs related to rail transportation Managing a railroad Services that railroads provide	List 5 services the railroad provides Describe how railroads are managed by studying the planning, organizing and controlling functions of a railroad timetable

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

FREIGHT TRAIN MURAL

II. ACTIVITY FORMAT:

A. Tools and Materials

Rolled large paper
Poster paint
Scissors

B. Procedures for this activity (with helpful hints)

1. Talk about kinds of railroad cars on a freight train and their uses i.e., box car, gondola car, stock car, tank car, hopper car, refrigerator car, diesel engine, piggy back car.
2. Have class divide up into small groups (2-3).
3. Choose a car and do a large printed picture of it.
4. Put completed cars around the room walls.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT
PLANSHEET

TITLE: USING MAPS AND GLOBES

GRADE LEVEL: 3-4

GENERAL OVERVIEW: Children should be aware of their place on this planet and what location they share with the rest of the world.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books: How We Use Maps and Globes by Muriel Stanek
A Map Is A Picture by Barbara Rinkoff
The Social Sciences - Concepts and Values, Harcourt, Brace & World
Maps Unfold the World - Part I and II (spirit masters), Milliken Publishers

Films:
- Globe and Our Round Earth
- Using Maps - Measuring Distances
- Climates
- Maps Are Fun

Filmstrips:
- Reading Directions on Maps
- Language of Maps
- Reading Physical Maps
- Reading Political and Economic Maps

2. Field Trips:

- Following maps to classmate's homes
- Walk through neighborhood
- City Hall
- County Planning

3. Human Resources:

- City Planner
- Mailman - using maps on routes
- Teachers
- Adult aides
- Student aides

4. Activities:

Map Making Using Different Media
Map puzzles
Globes
Relief Maps of U.S.
Profile Maps

Role Playing
  - Jobs and responsibilities of map makers
  - Taking a trip without use of maps
  - Teacher made a map that was inaccurate. Children tried to find a location in the school following a map. Discussed why being accurate is a must.

UNIT TITLE: USING MAPS AND GLOBES

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Social Studies	
Map Study	List and locate seven continents and two major oceans Distinguish between city, county, state, country, continent Distinguish between flat, relief and profile maps Differentiate between longitude and latitude
Science	
Climate (Seasonal change)	Identify and describe reasons for different climates
Day - Night	Recognize and cite evidence for day and night

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Brainstorming Research and group discussions	
Research and group discussions	

UNIT TITLE: USING MAPS AND GLOBES (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Language Arts	
Vocabulary development	
Directions	Read and follow directions on a map
Describing	Describe climate of certain geographical areas
Creative writing	Give directions to a specific location
Math	
Measurement	Construct a map drawn to scale
	Compute distance
Time	Identify time zones

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Research and individual writing assignments Oral presentations of reports on climates	
Map and globe activities	

UNIT TITLE: USING MAPS AND GLOBES (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Career	
Managing	Plan and organize a map-making activity
Producing	Construct a map
Servicing	Relate why map-making is important and how cartographers service society

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Map and globe activities Topographical Flat	
Interview city and county planners, cartographer, surveyor, mailman	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

"POT OF GOLD"

II. ACTIVITY FORMAT:

A. Tools and Materials

Pot of gold
Neighborhood maps
Directions to the "pot of gold"

B. Procedures for this activity

Hide the "pot of gold" in the neighborhood.
Have students look for it without a map.
After - repeat the experiment using a map (at a different location)

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

GLOBES

II. ACTIVITY FORMAT:

A. Tools and Materials

Papier mache	Balloon	Two strings
Paint	Scissors	Glue
Maps	Brushes	

B. Human Aides and Resources

Art teacher

C. Procedures for this activity (with helpful hints)

Make a wad of paper
Cover with papier mache
Let dry
Paint blue
Cut out continents from maps and pin string for hanging
Glue continents on map
Hang with additional string

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAP PUZZLES

II. ACTIVITY FORMAT:

A. Tools and Materials

Dremel saw
Shellac
Maps - flat

1/4 inch plywood
Elmer's glue
Paint
Paint brushes

B. Human Aides and Resources

Adults and parents

C. Procedures for this activity (with helpful hints)

Elmer's glue - glue maps on 1/4" plywood - tempered masonite preferred
Cut maps apart
Shellac maps
Team children in two's to cut out maps into puzzles
Paint back of puzzles - color code
Shellac again
Put puzzles together to check pieces and put in coded box

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

MAP MAKING USING DIFFERENT MEDIA

II. ACTIVITY FORMAT:

A. Tools and Materials

Brushes
Scissors
Oak tag
Clay
Paint
Seeds
Glue
Tissue

B. Procedures for this activity (with helpful hints)

Use oak tag for the map's backing
Design a map key
Outline the map
Fill in areas with many materials (clay, seeds, tissue paper, etc.)

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

RELIEF MAP OF UNITED STATES

II. ACTIVITY FORMAT:

A. Tools and Materials

Opaque projector
Map of United States
Bristol board
Cornstarch
Non-iodized table salt
Food coloring
Pencil

B. Resources

Relief map of United States

C. Procedures for this activity (with helpful hints)

1. Trace map of United States on large sheet of bristol board.
2. Make Magic Modeling Goop -

MAGIC MODELING GOOP

2 cups table salt
2/3 cup water
1 cup cornstarch (loose)
1/2 cup water

Mix salt and 2/3 cup water in saucepan, stirring until mixture is well heated, three to four minutes. Remove from heat and add constarch which has been mixed with 1/2 cup cold water. Stir quickly. Mixture should be consistency of stiff dough. If mixture does not thicken, place over low heat and stir, about one minute, until it forms a smooth pliable mass. Leave the mix a natural white, or divide into portions and add regular food coloring until desired brilliance is achieved. Modeled objects may also be painted or decorated when dry to give surface color. Mix can be kept indefinitely if wrapped in clear plastic wrap or foil. Makes 3/4 pounds. No refrigeration is necessary.

3. Color, using food coloring, and place on map to illustrate the elevation areas of United States.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

Profile Map showing businesses on Eleven Mile Road within Longfellow School District using 3 inches for each block.

II. ACTIVITY FORMAT:

A. Tools and Materials

- Large white paper
- Pencil
- Marking pencil
- Ruler
- Yardstick
- Map of Royal Oak
- Black construction paper

B. Resources

Map of Royal Oak

C. Procedures for this activity

1. Draw a scaled map of Eleven Mile Road and intersecting streets.
2. Using black construction paper make pictures of businesses. Paste in appropriate place on map.
3. Discuss role of employees in these establishments.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PRODUCT MAP OF MICHIGAN

II. ACTIVITY FORMAT:

A. Tools and Materials

Large white paper
Opaque projector
Map of Michigan
Magazines for pictures
Michigan reference book
Crayons
Pencils
Scissors
Marking pencil

B. Resources

Exploring Michigan by Delphine Newcomb

C. Procedures for this activity

1. Using opaque projector, trace large map of Michigan on white paper.
2. Cut pictures of produce raised and products manufactured in Michigan and paste on map.

SCHOOL DISTRICT OF THE CITY OF ROYAL OAK

PROJECT LET

INTEGRATED TEACHING UNIT PLANSHEET

TITLE: WEATHER

GRADE LEVEL: 3-4

GENERAL OVERVIEW: All living things must make adjustments to weather conditions if they are to survive. Children need to be acquainted with weather terms and forms. They need experience in predicting weather by using weather instruments.

TEACHING/LEARNING RESOURCES:

1. Reference Materials:

Books:
ABC Science Series 3
How Weather Affects Us
The Wind - Bendick
Exploring the Weather - Gallant
What is Weather? - Syrocki
Probe

Films:
Rainshower
The Sky
How Weather Helps Us
Let's Learn to Predict the Weather
Origins of Weather
Weather: Understanding Storms

Filmstrips:
Air, Wind, Weather
Weathering at Work
Our Weather
Weather Bureau
What Makes Weather
Clouds
Sun, Wind, Rain
Adventures of a Raindrop

2. Field Trips:

Airport
Weather walk in neighborhood

3. Human Resources:

    College students
    Weather forecaster

4. Activities:

    Pinwheels
    Rain gauge
    Dog barometer
    Wind sock
    Wind vane
    Daily recording of weather
    Bird feeder

UNIT TITLE: WEATHER

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Science	
Weather:	Describe the weather
Conditions	List different forms of weather
Predictions	Read weather instruments and make predictions based on the readings
Instruments	Construct a weather instrument
Mathematics	
Measurement	Read and compute degrees on a thermometer
Social Science	
Weather: Affecting people and animals	List ways weather affects people and their occupations and animals

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Observation - (reading reports, reading weather instruments, research, listening to weather reports). Weather instrument activities	
Taking and recording daily temperatures	
Observation, research group discussion	

UNIT TITLE: WEATHER (continued)

CONCEPTS	BEHAVIORAL OBJECTIVES
	As a result of this unit, each child will be able to:
Careers	
Managing	Describe a weather station
Producing	Give a weather report and explain how a weather report is formulated
Servicing	Explain the occupation of weathermen as a service to man
Language Arts	
Creative writing	Write a report, letter
Choral reading	Participate in a choral reading

METHOD OF IMPLEMENTATION	RESOURCE PEOPLE & MATERIALS
Guest speakers and group discussion	
Reports about different forms of weather, thank-you notes Choral reading	

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

PINWHEEL

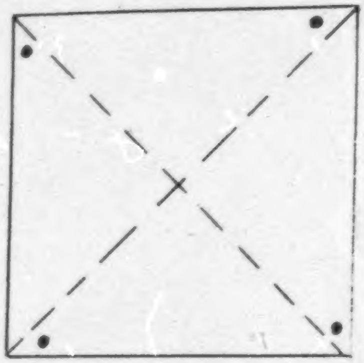
II. ACTIVITY FORMAT:

A. Tools and Materials

Paper 6" x 6"
Paste
Pins
Pencil with eraser on tip

B. Procedures for this activity

1. Divide the paper in quarters diagonally and put a dot in the corners as illustrated.
2. Cut along the dotted lines to about 1/2" from center dot.
3. Bend over the corners with dots and paste each point to the center of the paper.
4. Push a pin through the middle into the eraser of a pencil.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

RAIN GAUGE

II. ACTIVITY FORMAT:

A. Tools and Materials

Ruler
Jar
String

B. Procedures for this activity

1. With two pieces of string, tie the ruler to the outside of the jar.
2. Set outside where jar will catch rain.
3. Measure after every rain and record the amount of water in the jar.

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

DOG BAROMETER

II. ACTIVITY FORMAT:

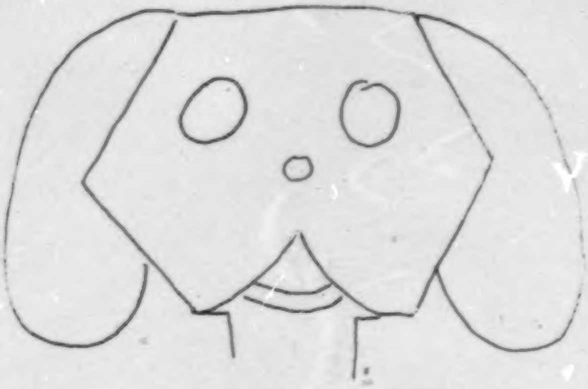
A. Tools and Materials

Dremel saw
Pencils
Paint brushes
Drill

Plywood - very think 7" x 7" pieces
Blotter paper - 2 - 3" x 3" squares per dog
Cobalt chloride - water mixture (4 parts to 1)
Colored construction paper

B. Procedure for this activity

1. Have children cut plywood in shape of a dog's head.
2. Drill out large circles for the eyes.
3. Paint the blotter paper with the cobalt chloride.
4. Paint the dog's features.
5. Make ears from construction paper.
6. Glue blotter paper under the eye holes and ears onto head.



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CONSTRUCTION OF WIND SOCK* - pp. 63 and 64 LET Guide - Anemometer - Wind Vane

II. ACTIVITY FORMAT:

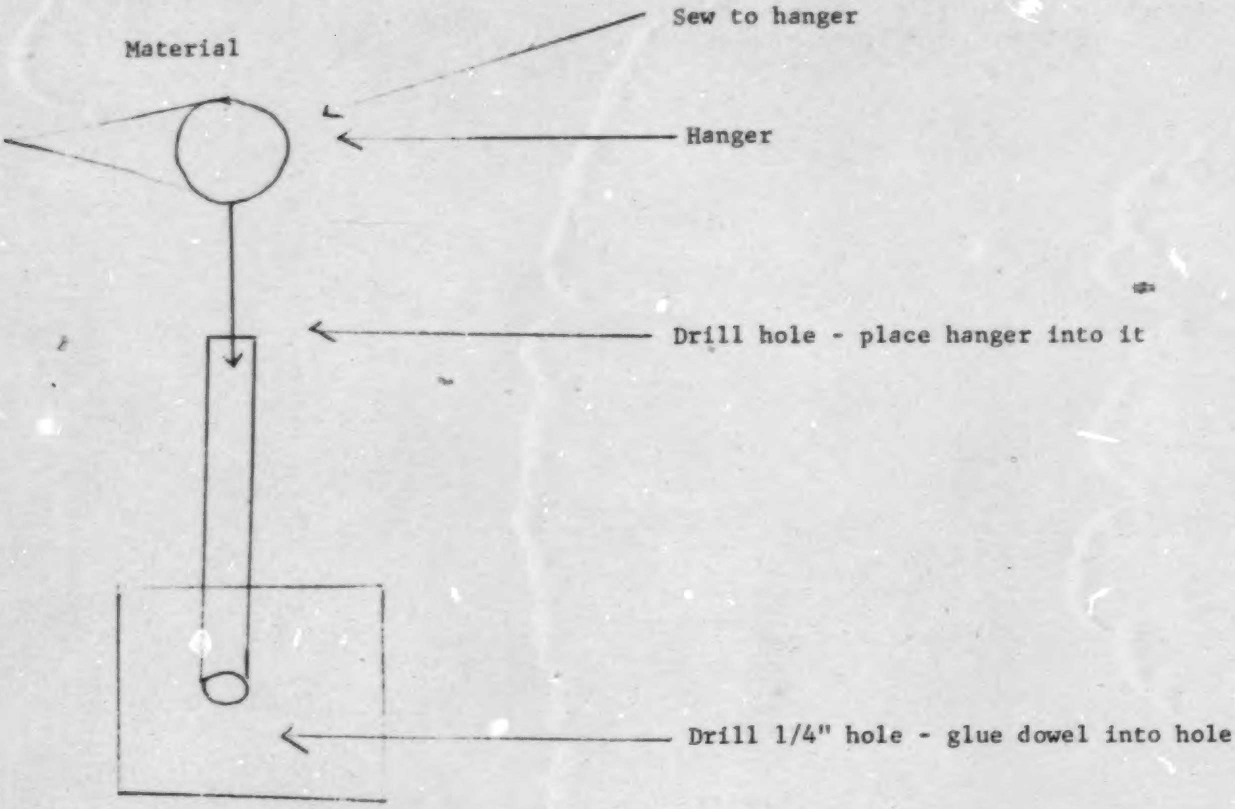
A. Tools and Materials

Plywood 1/4" x 12" x 12"
Coat hanger
Tool panel
1 yard cotton material
1" nails
1/2" doweling

B. Human Aides and Resources

Parents
Teacher Aide

C. Procedures for this activity (with helpful hints)


Sew to hanger
Material
Hanger
Drill hole - place hanger into it
Drill 1/4" hole - glue dowel into hole

HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

WEATHER VANE

II. ACTIVITY FORMAT:

A. Tools and Materials

Tag board
Large wooden spools
Plastic straws
Scissors
Pins or nails

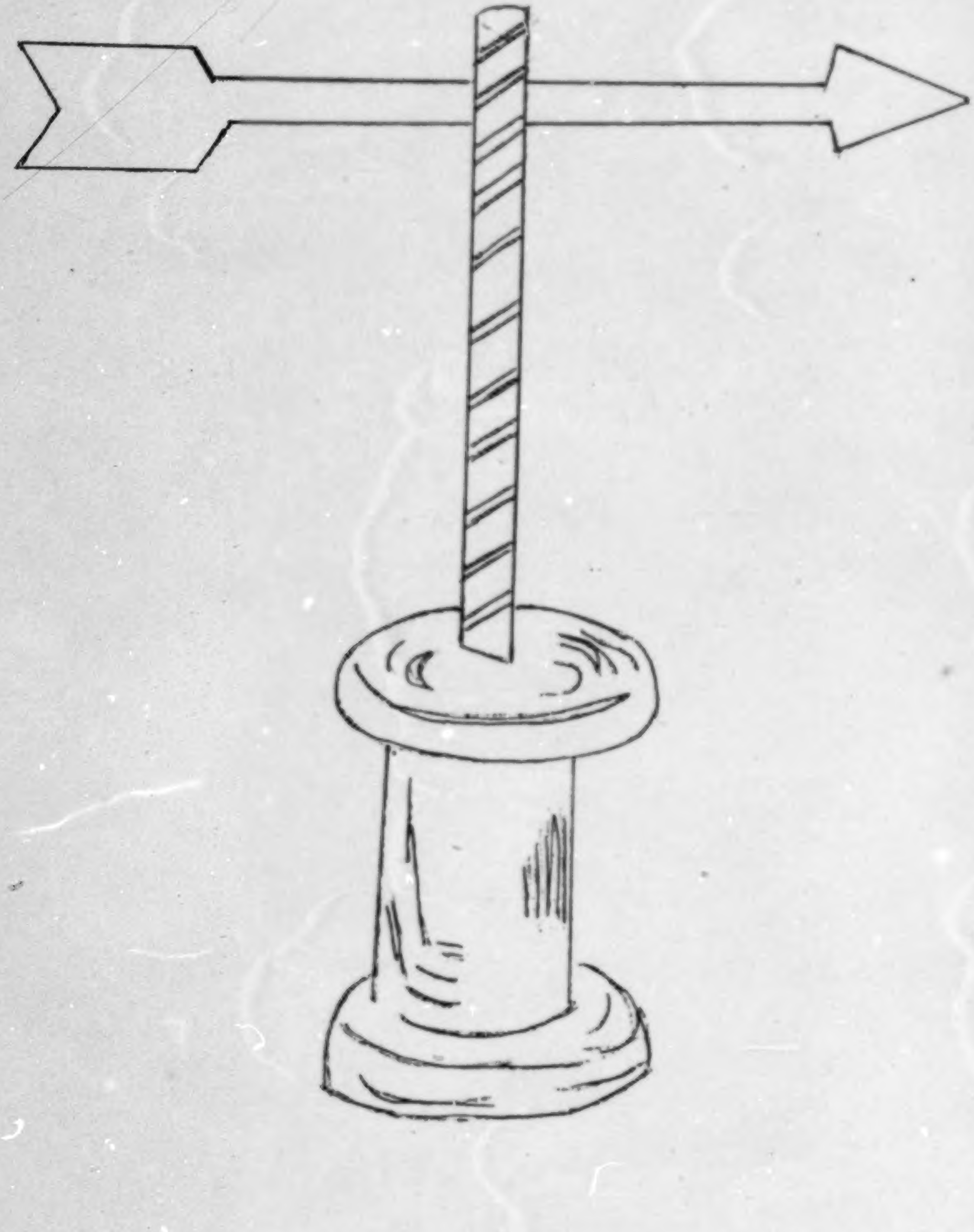
B. Human Aides or Resources

Weather Experiments by I. Podendorf

C. Procedures for this activity (with helpful hints)

1. Put a long pin up through a large spool (preferably wood).
2. Set plastic straw on the pin so it can turn freely.
3. Slit plastic straw at top.
4. Glue arrow from tag board on the straw.

A. WEATHER VANE



HANDS ON ACTIVITY (STUDENT PERFORMED)

I. NAME OF ACTIVITY

CHORAL READING

II. ACTIVITY FORMAT:

A. Tools and Materials

Copies of poem for each member of class
Tape recorder

B. Procedures for this activity

Assign parts, practice, record.

THE WIND

I heard the wind blow.

I saw the wind blow.

It whistled,

It whirred,

It whirled.

The branches crackled.

The green leaves shook,

And twisted,

And trembled,

And curled.

The wind blew loud,

The wind blew long.

It rumbled,

It thundered,

It roared.

The great trees swayed,

The sky grew black,

And it rained,

And it stormed,

And it poured.

WEATHER

(Choral Reading)

All	Weather is Full of the nicest sounds...
1	it sings (bell - triangles)
2	it rustles
1 & 2	and pings and pounds (drums and triangles)
1	and hums and twinkles (sand block and triangles)
2	and strums and twangs (soft drums)
1	and whishes (voice)
2	and sprinkles (triangles)
1 & 2	and splishes (wood block)
1	and Bangs (drum)
2	and mumbles
All	and grumbles and rumbles and flashes and crashes:
1	I wonder....
2	if thunder frightens a bee,
1	a mouse in her house,
2	a bird in a tree,
1	a bear
2	or a hare
1	or a fish in the sea?
All	NOT ME!!!!

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